

2015

# THE SHIELD OF DAVID



THE ISRAEL AIR FORCE INTO THE 1990s Samuel M. Katz



**CONCORD**  
PUBLICATIONS COMPANY



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603-609 Castle Peak Road  
Kong Nam Industrial Building  
10/F, B1, Tsuen Wan  
New Territories, Hong Kong

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**ISBN 962-361-915-4**

Printed in Hong Kong



## Introduction

*"Israel has no AVERAGE pilots. They are all the best that are in the sky."* — A U.S. Navy TOP-GUN instructor.

*"I followed the Flogger, playing cat-and-mouse, over the skies of the Beka'a. My Sidewinder locked on and the launch button depressed. It was really no contest. All I saw was impact and a parachute emerge. Just an average day on the job."* — An IAF F-15 pilot, returning from a sortie over Lebanon, June 1982.



Two Kfir C-7s, one bedazzled in a desert camouflage scheme and the other in an air-superiority gray, patrol the skies over central Israel. Note additional fuel tanks carried, as well as Python 3 air-to-air missiles. (IDF Spokesman)

Israel's air power dates back to its pre-independence underground army, the *Haganah* (or "Defense"), and its primitive aerial component known as the *Sherut Ha'Avir* (or "Air Service"). When the Arab states of Egypt, Transjordan, Iraq, Syria and Lebanon invaded Israel on May 15, 1948, a day following Israel's declaration of independence, launching massive aerial bombings of Israeli targets and cities in the process, the *Sherut Ha'Avir* had no viable response. When, days later, the Israelis received a supply of Czechoslovak-produced clones of the *Luftwaffe* Me-109G, called the Avia S-199, a new element into Middle Eastern military equations was formed; the *Sherut Ha'Avir* became the *Heyl Ha'Avir*, or "Air Corps," although it would become more commonly known as the Israel Air Force, or "IAF." During the 1948 War, the IAF was soon able to obtain a hodgepodge of aircraft from World War Two surplus supplies, including: the C-46 and, of course, the C-47; Bristol Beaufighters; Supermarine Spitfires; P-51 Mustangs; and, even the B-17 Flying Fortress. This "Tower of Babel" of aircraft was handled by a literal "Tower of Babel" of flyers, mainly Gentiles, Second World War veterans, who volunteered to save the Jewish State from imminent destruction in a multi-lingual, multi-cultural air combat unit known as the "*Ma'Chal*" (or foreign volunteers).

For the next ten years, however, Israel's aerial status remained virtually the same. The Israeli Prime Minister, David

Ben Gurion, was not a firm believer in the attributes of air power. Severe budgetary restraints limited the IAF's front-line fighter aircraft to Second World War surplus piston-engine fighters, like the ex-RAF Mosquitoes and American P-51 Mustangs. When the Egyptians obtained their first supply of Soviet-produced MiG-15s and British-produced Meteor jets in 1955, the Israelis were forced to respond in kind. The first IAF jets were the British Meteor; soon, close relations between Israel and France helped bring the Dassault M.D. 450 Ouragan and the Dassault Mystère-IV-A to the IAF. Israel's limited financial ability to purchase these "top-of-the-line aircraft" was extremely constraining and, as a result, piston-aircraft were still utilized throughout its order of battle. Many Western nations were also unwilling to train Israeli pilots, and the IAF was forced to create its own guidelines and standards of instruction. The success of this indigenous "born in battle" practice was proven in April 1956, when IAF jets downed three Egyptian Air Force Vampire jets in dog-fights above the Sinai Desert. At last, there was an indication that the IAF's emphasis on quality, in order to make up for its severe quantitative gap, began to shine through as Israel searched for aerial superiority.

On October 31, 1956, the Middle East erupted in full-scale war for the second time in seven years in what became known as the Sinai Campaign. Hours before war was to break-out, sixteen P-51 Mustangs flew a few dozen feet above the sandy



wasteland of the Sinai Desert and used their propeller blades to slice through Egyptian telephone lines. The IAF's aerial opening shot was soon followed by a flight of sixteen C-47 Dakotas ferrying a battalion of paratroopers deep into enemy territory for their date with destiny at the Mitla Pass; the lead C-47, it must be added, was piloted by a female flyer. During the brief Sinai Campaign, the IAF's small fleet of combat aircraft was used to its maximum effectiveness: fighter and bomber aircraft strafed roads and bombed enemy positions; light piston engine transports ferried senior officers, conducted long-range reconnaissance forays; heavier transport aircraft supplied the troops deep behind enemy lines. In 1,846 combat sorties, the IAF downed nine Egyptian fighters in aerial combat and destroyed an astounding 308 tanks and vehicles in strafing runs. The success changed Israel's view of its air force forever.

In the years to follow, the IAF obtained Sud.Vatour bombers, Dassault Super-Mystère B-2s and Poter Air MC-170 Fouga-Magister jet-trainers from France and, most importantly, the trim, delta-wing, devil of an aircraft: The Dassault Mirage IIIC. The acquisition of the Mirage IIIC, equipped impressively

enough, with 30-millimeter cannons (so that once the enemy's aircraft were destroyed, ground targets could be attended to) was, indeed, a turning point. It was a boisterous statement made by the IAF's boisterous commander at the time, Major-General Ezer Weizman—a man known as “Mr. Heyl Ha’Avir.” The

IAF Mirage's first baptism of fire was a highly successful one: in a dramatic dog-fight over the tranquil Sea of Galilee on July 14 1966, a Mirage IIIC blew a Syrian Air Force MiG-21 Fishbed out of the sky. A month later, the IAF obtained an intimate glimpse into the top-of-the-line Arab air-superiority fighter, the MiG-21 Fishbed, when, in a brilliant intelligence coup, an Iraqi pilot defected his Fishbed to Israel. The aircraft, later designated with James Bond's infamous 007 designation, was carefully dissected by eager technicians and its data passed along to IAF pilots who soon became intimate with the MiG-21.

The IAF's finest hour was, undoubtedly, the morning of June 5, 1967. In response to months of provocation, the IAF initiated a massive blitz against Egyptian Air Force bases which would become one of the epic surprise assaults in modern military history. As Egyptian Air Force pilots returned from morning patrols, and their replacements munched on hearty breakfasts, the IAF drew first blood in a vindication of their aerial might. In a desperate gambit, almost every combat aircraft in the IAF inventory set out that morning to destroy Arab air power on the ground! In less than three hours, hundreds of Egyptian planes were destroyed on their runways by bombs, cannon and rocket fire. The IAF's attack was conducted in unrelenting waves of aerial destruction. The Egyptian Air Force never had a chance;

neither did the Jordanian, Syrian and Iraqi air forces who received equally destructive attention. The IAF accounted for the destruction of an astounding 391 enemy planes on the ground, the total inactivation of 60 enemy airfields and the downing of over 60 enemy aircraft in aerial combat. Once the Arab air forces were destroyed, the IAF dedicated itself to ground-support operations, hitting retreating enemy tanks, vehicles and formations mercilessly.

Peace did not follow the 1967 War and the IAF found itself more pressed than ever. Because Israel's preemptive strike sparked the conflict, the politically fickle French, the IAF's sole supplier of combat aircraft, imposed an all-inclusive arms embargo preventing delivery of 50 Dassault Mirage V fighter-bombers aircraft which were already paid for! President Nasser initiated a “War of Attrition” against Israel; it was a saturated conflict meant to utilize Egypt's vast numerical advantage in manpower and fire-power to undermine Israel's resolve to fight and keep its newly captured territories. Israel responded with the IAF!

Along the Suez Canal, the Jordan Valley Desert and the

Syrian hills, Arab artillery attacked Israeli positions, Palestinian guerrillas infiltrated into Israel. IAF operations were the vanguard of the Israeli effort and two new weapon systems were entered into the equation: the A-4 Skyhawk and the F-4E Phantom. The first Skyhawks reached Israel shortly after the 1967 War and the Phantoms in 1969. Both



The Star of David joining the red, white and black roundels of the Syrian Air Force: the IAF's MiG-23 prepares for a landing back at base. The acquisition of the Flogger, through the defection of Syrian Air Force Major Adel Bassem on October 11, 1989, provided the IAF with a wealth of information on one of the Arab's most potent combat aircraft. (Michael Vinraub/IDF Spokesman)

aircraft offered the IAF a new perspective; the longer range aircraft capable of carrying heavier payloads. Soon, the entire nation of Egypt was in the bomb-sights of IAF aircraft, as sonic booms with “Star of David” signatures were heard over Cairo. The Skyhawk was a pugnacious little aircraft capable of 655-mph speeds, and an ordnance payload in excess of 9,920-lb. In Israeli hands, and with the capable IAF pilots at the throttle, the Skyhawk could provide the IAF with the hard punch capable of mass-bombing raids while deploying only few aircraft. The Phantom, on the other hand, was military superiority. A complete package of agility, speed, and strength (which made it a front line interceptor as well as a long range bomber), the Phantom was capable of Mach 2.17 speeds (1,432-mph), and could carry 3,020-lb. in ordnance. It became Israel's most potent weapon.

The Egyptians and Syrians, however, had a trump card of their own: a powerful and generous ally called the Soviet Union. The Soviet's carefully cultivated the Arab states with abundantly generous supplies of military hardware, including top of the line surface-to-air missile (SAM) batteries, such as the SA-2 “Guideline” and SA-3 “Goa,” as well as hundreds of anti-aircraft gun batteries, eventually manned by over 15,000 Soviet officers! The result, IAF deep-penetration raids against Egypt were met



by murderous barrages of SAMs and accurate hails of radar-controlled anti-aircraft fire. The aerial segment of the War of Attrition ended in explosive fashion on July 30, 1970, when a flight of Mirage IIICs and F-4E Phantoms ambushed a squadron of Egyptian Air Force MiG-21Js flown by Soviet pilots. In the ensuing dogfight, which lasted 30 seconds, the IAF downed five of the MiGs without suffering a single loss of their own.

The IAF would find itself in another bitter fight for the survival on October 6, 1973. Just hours before the Jewish State was about to observe Yom Kippur, the holiest day in Judaism, Israel's Prime Minister, Golda Meir, received intelligence reports that both Syria and Egypt were to launch a full-scale surprise attack against Israel later in that day. The actual blitz was a ferocious assault. The might of the IAF, the squadrons of Mirage IIICs, Phantoms and Skyhawks, were issued with the difficult and dire task of keeping the Syrians and Egyptians at bay, to allow the reservists, the numerical might of the IDF, the time and opportunity to reach the front. The Arabs, however, incorporating the lessons learnt from the Soviets in the War of Attrition, covered their impressive advances with mobile SAM

umbrellas—consisting mainly of the SA-6 "Gainful": these missiles took an enormous toll on IAF aircraft who had to fulfill an air-superiority as well as aerial-artillery role. The SAMs, in fact, neutralized the IAF. Israeli pilots flew what amounted to almost suicidal **Kamikaze**-type sorties; flying straight into SA-2, SA-3, SA-4, SA-6

and ZSU-23-4 quad-barrel radar-controlled 23-millimeter guns, they engaged their radars while other aircraft attempted to destroy them. Nevertheless, the IAF was able to provide much needed ground support to the conscripts at the front, providing absolute air cover to Israeli proper, and allow the reservists who were mobilized, the ability to be pressed into the struggle.

During the eighteen days of brutal combat, the Egyptian and Syrian SAM umbrella claimed 105 IAF aircraft. Most of these aircraft were soon replaced by generous shipments from the United States in what became known as the "aerial bridge." The arrival of the replacement aircraft, coupled with the ground campaign turning in Israel's favor, allowed the IAF to assume the offensive. With anti-radiation ordnance, IAF aircraft bombed and destroyed dozens of SAM batteries while forcing the Arab aircraft into action; in one-sided dog-fights 360 Syrian and Egyptian aircraft were blasted out of the sky; while dozens of helicopters ferrying Syrian and Egyptian commandos were destroyed before they could deploy behind Israeli lines. Although the IAF suffered an astounding casualty rate—almost 20 percent of its front-line aircraft and personnel—it was the difference between an Israeli defeat or victory in a war which could very well have meant the destruction of the State of Israel.

The Yom Kippur War was also the first conflict in which the

IAF deployed helicopters in significant numbers. In fact, prior to the 1973 War, the IAF made little use of its minuscule fleet of whirlybirds, made up primarily of aging French Sud Aviation SA321K Super Frelons and Sikorsky S-58s, mainly because of their large-size and vulnerability to ground fire. They were primarily reserved for most transport roles, like ferrying a force of reconnaissance paratroopers to Beirut International Airport for a spectacular commando raid in December 1968, or providing an airborne taxi to infantry units conducting a pursuit of Palestinian terrorists. When the IAF acquired the small and agile Bell-205 and Bell-212 Vietnam-era helicopters from the United States in the late 1960s and attack helicopters in the 1970s, Israel's use of the rotor-blades would expand to unimaginable dimensions.

Another "change" in IAF's theory in its use of aircraft was also seen during the bitterly contested battles of the Yom Kippur War when heavy transport aircraft, like the aged warrior C-47 Dakota and the newly acquired C-130 Hercules, moved large amounts of essential combat supplies to the front lines in Sinai. Such aircraft extended the "offensive" range of the supply-

hungry IDF and made the Middle Eastern theater—and points beyond—entirely within Israel's reach. Three years later, on the night of July 3-4, 1976, IAF C-130s flew 2,300 miles to shuttle a combined IDF commando force to Entebbe in Uganda and then bring the force back together with 103 "ex-hostages" rescued from the clutches of



During an acclimation flight, an F-16D joins the newly obtained "blue and white" Flogger-B. (IDF Spokesman)

Palestinian terrorists.

In the late 1970s, the IAF entered into its own technical age; it was an era which saw the IAF expand and diversify its aircraft from aging workhorses to top-of-the-line high-tech Mach.2 speed machines. Besides the production of its own indigenously produced fighter—an advanced version of the Mirage IIIC: a delta/canard wing fighter bomber called the **Kfir** (or "Lion Cub")—the IAF obtained two high-tech masterpieces from America: the elite of the elite in air superiority, the F-15 Eagle, an aircraft described by Israeli flyers as "a plane which loves its pilot," and the F-16 Fighting Falcon fighter bomber. While the **Kfir** provided the IAF with versatility and strategic depth, the F-15 and F-16 augmented the abilities and range of IAF operations. All of this would be choreographed in mid-air by the Grumman E-2C Hawkeye AWACS aircraft.

The incredible, almost legendary abilities of the IAF flyers was, perhaps, best illustrated on June 7, 1981, when a flight of six F-15s and eight F-16s, piloted by the IAF's best pilots, all combat veterans and some even (Arabic speaking) pilots flew from southern Israel across the Gulf of Eilat, then across the desert into Saudi Arabia, north towards Iraq, Baghdad, and the **Osirak** nuclear reactor—which was on the verge of producing weapons grade plutonium. The reactor was heavily defended by



scores of SAM batteries and radar-controlled anti-aircraft gun emplacements, but the tenacious IAF flyers swooped in from the south and in one lethal bombing dive, turned the nuclear-weapons facility into a definition of full-scale destruction. The raid illustrated to the IAF's ability to accomplish the impossible and captured the world's imagination. In retrospect, the raid might also have saved the world from viewing a preview to nuclear Armageddon.

The raid on Baghdad was, perhaps, the IAF's most spectacular operation to date. One year later, the IAF would impress the world once again, on a day in June—this time over the skies of Lebanon. Since the Lebanese Civil War, IAF aircraft had participated in dog-fights with Syrian aircraft; it was here that the *Kfir*, the F-15 and the F-16 recorded their first "kills" ever; MiG-21s, MiG-23s and MiG-25s, the elite of Soviet produced military aviation, which failed to evade IAF heat-seeking missiles and 20-millimeter cannons were their victims. For years, Lebanon was the flash-point for the Middle East's "next" major conflict, as the Palestinian mini-state in southern Lebanon and intense Syrian military activity brought threats to Israel's northern frontier which were intolerable. In the spring of 1981 Syria deployed mobile SAM batteries in eastern Lebanon's Beka'a Valley; a move meant to hinder the IAF's bombing attacks against Palestinian factions allied to Damascus.

On June 6, 1982, tens of thousands of Israeli soldiers burst across the Lebanese frontier, in what has become known as "Operation Peace for Galilee." The IDF, commanded by Chief-of-Staff Lieutenant-General Rafael "Rafael" Eitan, himself a certified jet pilot, was determined to once and for all remove the Palestinians from Lebanon, and air-power was to play a vital role in executing this objective. But the presence of Syrian SAM batteries in eastern Lebanon severely hindered IAF operations; a situation clearly not to be tolerated for long. Between June 9-10, in a period of under 48 hours, the IAF took out the Syrian SAM umbrella and most of the Syrian Air Force in one of air-warfare's

most impressive and technologically masterful victories, IAF electronic intelligence aircraft, Beechcraft RU-21s, according to published reports, Grumman OV-1 Mohawks and Boeing 707s, were dispatched to locate the missile-site radars while Israeli and American produced remotely-piloted vehicles (or "RPV") (small propeller driven "toy-aircraft" equipped with advanced electronics and, sometimes, payloads), were flown over the Beka'a Valley to act as aerial decoys. Foreign reports indicated that with the "active" electronic battlefield environment in its peak, E-2C Hawkeyes directed squadrons of A-4, F-4, F-16 and *Kfir* fighter bombers, all carrying anti-radiation missiles and bombs towards their targets. Destruction was absolute.

The Syrian Air Force responded desperately. They sent in wave after wave of MiG-21, MiG-23 and MiG-25 fighters to intercept the IAF bombers, but they were met by awaiting squadrons of *Kfirs*, F-15s and F-16s, all armed with Sidewinder, Sparrow, Shafrir and Python air-to-air missiles. In the following three days of aerial combat, the IAF shot down over 60 Syrian MiGs and Sukhois to **NO** Israeli losses. During the three months of fighting, the IAF shot down over 90 Syrian aircraft (including twenty by ground and anti-aircraft fire); the only Israeli aircraft destroyed in the years since 1982 were a medevac helicopter, a Skyhawk, and an RF-4C reconnaissance Phantom—all shot down by ground-fire and surface-to-air missiles. The virtual destruction of the Syrian Air Force allowed the IAF to concentrate on the true objective of "Operation Peace for Galilee," and Palestinian targets throughout Lebanon were hammered daily by IAF bombing raids. Helicopter gunships, airborne tank killers, were also utilized for the first time in military history. The IAF's fleet of Cobra and Defender gunship proved deadly for Syrian armor.

In the years following the 1982 War, the IAF continued its attacks against Palestinian and, later, Shiite terrorist targets in Lebanon and points beyond. The IAF attacked the PLO's Lebanon-exile headquarters in Tunis on October 1, 1985. The



During large-scale maneuvers in southern Israel, a Defender circles over two M113 APCs before heading out over the row of low hills in search of "enemy" armor. (IDF Spokesman)



attack force, eight F-16s and several F-15s flying high-altitude cover, had to fly 1,280 miles in each direction and were refueled in mid-air by Boeing 707s. The raid, a performance well beyond what most regarded as the IAF's operational range, was a firm statement of the IAF's capability to attack terrorism well beyond her borders. The IAF returned to Tunis three years later and, according to foreign published reports, provided ECM (electronic counter-measure) support to the IDF assassination of PLO military commander, Abu Jihad on April 16, 1988.

Such raids, utilizing all of Israel's arms in the execution of special operations, also illustrated, once again, the innovative thought behind IAF operations and equipment, a statement proudly expressed on New Year's Day 1987, when the *Lavi* (or "Lion"), an Israel Aircraft Industries produced fighter meant to bring the IAF into the 21st Century, made its virgin test-flight. A

sleek and electronically brilliant aircraft, the *Lavi* looked like a hybrid combination of two very successful warplanes: the delta-winged *Kfir* and the F-16. Unfortunately, it was "grounded" not by enemy SAMs, but by Israel's severe budget limitations. These budgetary restriction, however, did not prevent the IAF from receiving a

most special and unexpected gift. On October 11, 1989, Syrian Air Force Major Adel Bassem defected to Israel along with his MiG-23-S Flogger-B. The intelligence bonanza gained by looking at the performance and electronic "black box" defenses of the enemy's top-of-the-line-interceptor was of great significance. Another acquisition, in the summer of 1990, was the McDonnell Douglas AH-64 Apache, a low-flying, fast moving anti-tank dynamo which could easily turn a column of enemy armor into a twisted and burning graveyard. Its arrival in Israel came at the time of the Iraqi invasion of Kuwait—an initial period when it appeared as if Israel would be involved in any future fighting. The baptism of gunfire for the Apache would not come during the Gulf War, but on February 22, 1992, in southern Lebanon when a flight of Apaches were involved in a "selective" strike against the motorcade belonging to Hizbollah military commander Sheikh Abbas Musawi. On a twisting Beka'a Valley road, a fusillade of Hellfire missiles tore apart the Mercedes staff cars used by the Hizbollah commanders. According to reports published in several American publications, the aim of the mission was not the assassination of Musawi, but rather his abduction; according to the reports, the Apaches were to immobilize the motorcade and waiting Israeli commandos were to snatch Musawi and possibly trade him back to the Lebanese in exchange for captured IAF navigator Ron Arad who, while flying a bombing sortie over Lebanon in 1986, was captured

when an electronic malfunction destroyed his Phantom in the middle of a bombing run, and forced him to eject over Shiite territory. Although the Israelis have never denied or admitted to these reports, if true, it would appear as if the Apache's fire-control system was too accurate for its own good. Needless to say, however, the acquisition of the Apache bolsters an already lethal fleet of attack and tank-killing choppers in IAF service. More recently, the IAF has also ordered the UH-60 Blackhawk transport—as well as offensive—chopper.

The IAF's modern fleet of aircraft, pictured in the following pages, have proven significant in the history of the Israel Air Force. It has been over forty years of great struggle, sacrifice, dedication and, most of all, uninterrupted combat. All indication point to the IAF have greater and more dire responsibility in the months to come and the IAF's zone of concern, the operational

region that it may need to fly in the years to come has increased dramatically. With the historic peace accord now underway between Israel and the PLO, the peace holding up strongly with Egypt, and possible breakthroughs likely with Jordan and Syria, the principal threat to Israel comes from the east—from Iraq and more specifically Iran and these nation's long-



Excellent overall view of the IAF CH-53 *Yasur*. Note that yellow "V" "Friend or Foe" recognition symbol encompasses both the Star of David emblem and the aircraft's numeric designation. (IDF Spokesman)

range missiles and nuclear weapons programs. To meet these long-range challenges, the IAF had been searching for its fighter bomber of the future for the past several years in a contest that for nearly three years pitted the General Dynamics F-16 against the McDonnell Douglas F-18. Both aircraft were tested by the IAF but a last minute entry to the multi-million dollar acquisition run off was the McDonnell Douglas F-15I, the export version of the F-15E. A multi-faceted fighter-bomber and by far the most sophisticated combat jet in the world today, the F-15I in Israeli hands will be, according to one U.S. Air Force officer, "the most lethal fighting system ever conceived."

To many foreign observers and admirers, the IAF owes its success not to its high performance aircraft or technical mastery, but rather to its true secret weapon—its human element. Becoming a pilot in the Israel Air Force is about the most prestigious thing an Israeli conscript can achieve and certainly the most difficult. IAF flight training is legendary for its high attrition rate, superhuman expectations, and level of professionalism. As long as Israel can produce these flyers, these highly intelligent men willing to be cocky, arrogant, courageous, and face the dangers of Mach.2 combat with zeal, and as long as the IAF can produce a small army of instructors, technicians, ground crew chiefs and support personnel who keep these multi-million dollar aircraft in the sky, the skies of the Middle East will belong to the IAF.



## The Old Yet Reliable Warbirds



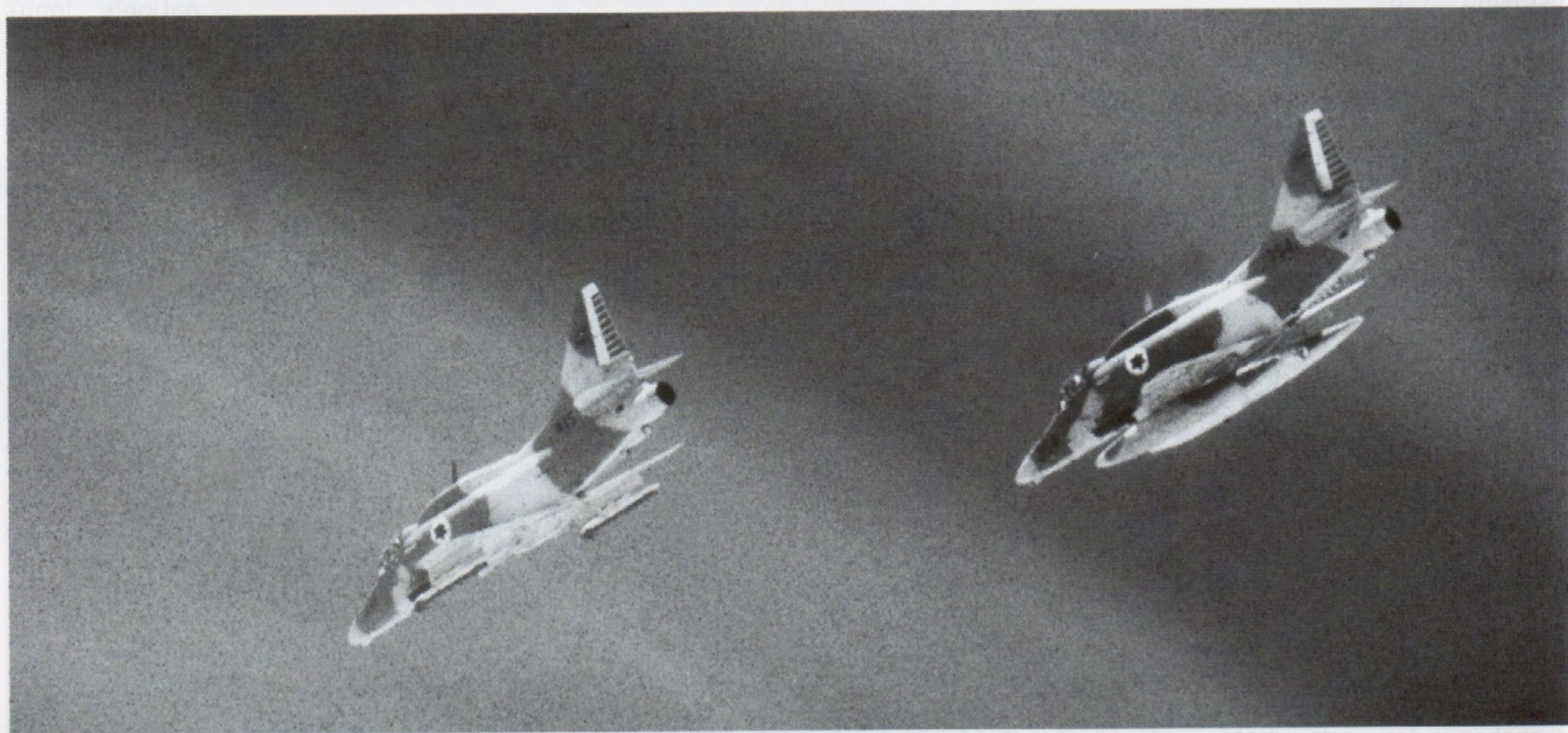
A veteran of the War of Attrition, 1973 Yom Kippur War, Operation Litani, Operation Peace for Galilee and countless other security operations against all of Israel's neighbors, the A-4 Skyhawk—it is seen here at the IAF's new museum at the sprawling Hatzirim Air Force base in the Negev Desert. (Samuel M. Katz)



Over the picturesque and majestic beauty of southern Israel, two IAF Skyhawks perform a refueling maneuver during mid-air exercises. Note additional external fuel tanks fitted to lead Skyhawk. (*Biton Heyl Ha'Avir*)



A modified Skyhawk, still functional in a training and emergency combat role, sits at an anonymous airbase awaiting a student pilot and a few hours of flight time. (IDF Spokesman)



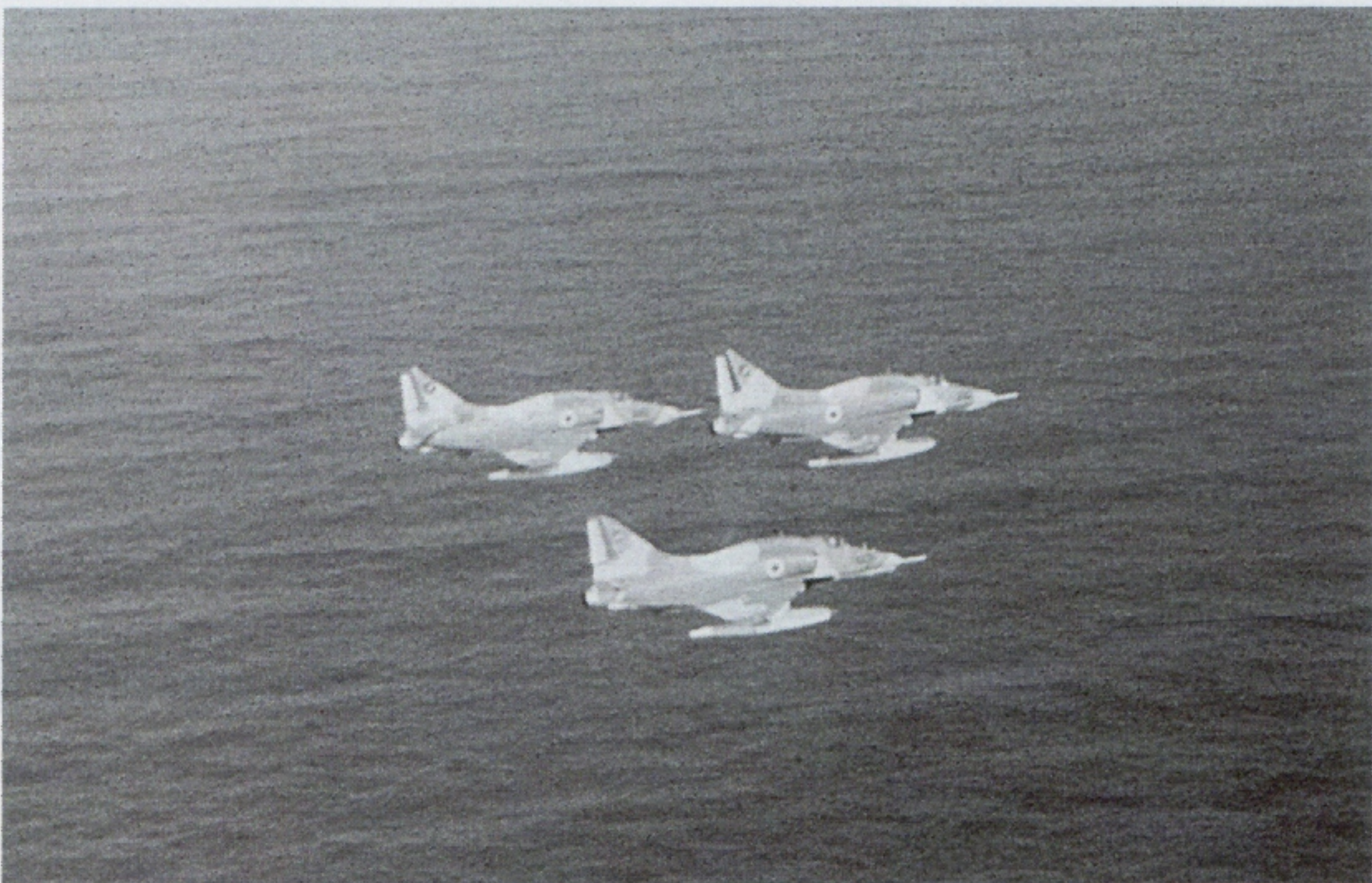
Over the hypnotic wilderness of the Negev Desert, two A-4 warbirds make a sweeping aerial return to their targets for an additional simulated run through. (*Biton Heyl Ha'Avir*)



Three IAF Skyhawks make a low-level roll over a defensive position in southern Israel providing aerial support in a mighty and reinsuring gesture of jet engine firepower. (*Biton Heyl Ha'Avir*)



Dusk at an anonymous airbase in central Israel. A neatly parked row of Skyhawks await their force of pilots who, after the preflight briefing, will fetch their helmets, G-vests and maps, and head out for an operational assignment. (*Biton Heyl Ha'Avir*)

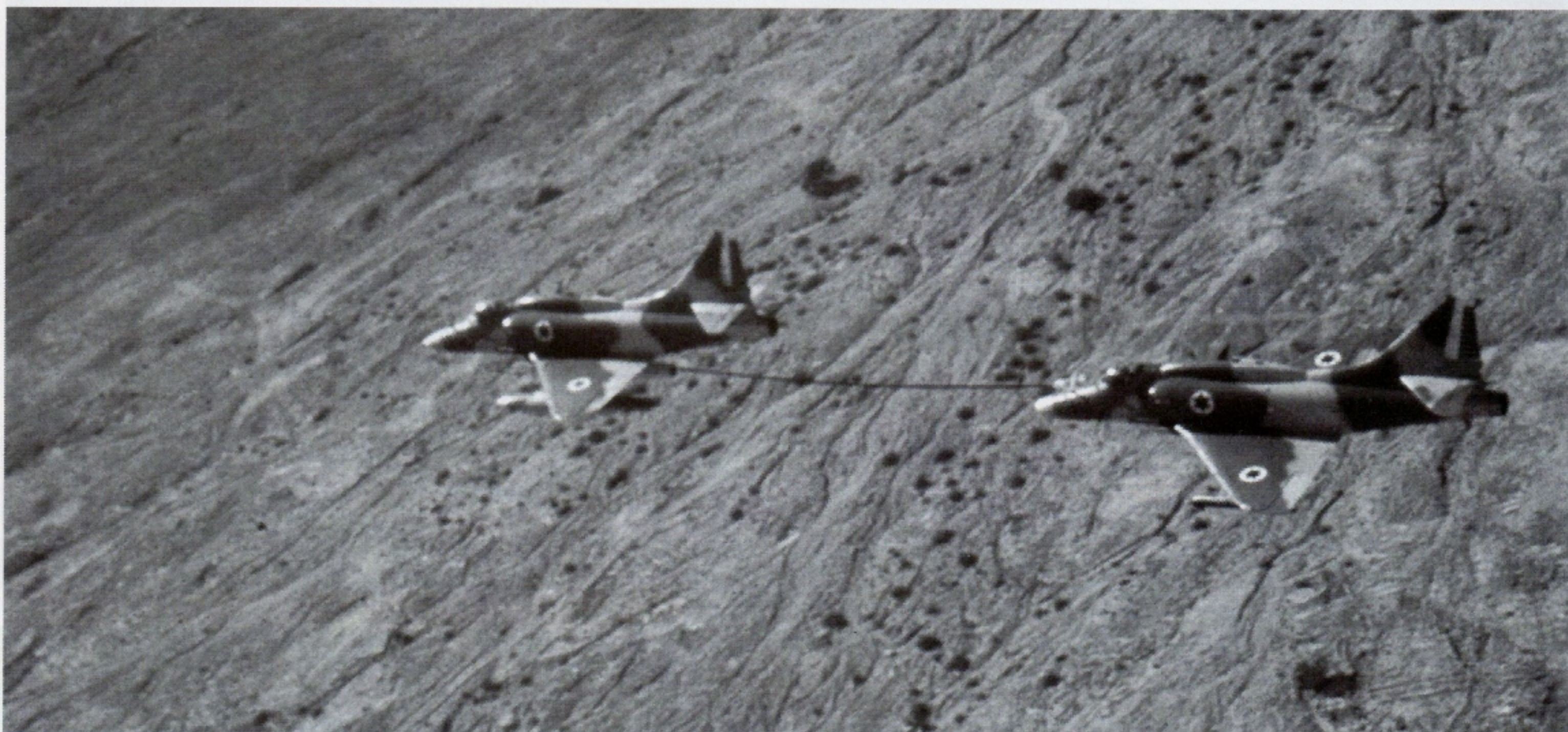


While on exercise in the Mediterranean, an attack formation of three IAF Skyhawks hugs the waves and keeps clear of "enemy" radar. (*Biton Heyl Ha'Avir*)





A modified Skyhawk, called by many in the IAF the "Skyhawk 200," operates in an air superiority role, seen here armed with Sidewinders. (*Biton Heyl Ha'Avir*)



Interesting photograph of an IAF Skyhawk refueling another A-4—the latter is armed with a Rafael Python-3 air-to-air missile, in an air superiority role. (*Biton Heyl Ha'Avir*)



The beloved Skyhawk remains an integral element of the IAF's future well into the next century. (*Biton Heyl Ha'Avir*)





Attempting to hug the majestic landscape as close to the ground as it can possibly reach, a trio of A-4 desert warriors who years ago blasted away at targets in Sinai (and the Golan for that matter) still manage to prove their worth as effective desert warriors—even in the age of the F-16, F-15 and Phantom-2000. (*Biton Heyl Ha'Avir*)



Inside its protective shelter at an anonymous airbase in southern Israel, a group of techno-professionals, all under the age of twenty-one, attend to the aging war horse. (Samuel M. Katz)



Laden down with external fuel tanks and ordnance, a Skyhawk take-off from an anonymous airbase in central Israel. Although the Skyhawk's internal avionics and electronic have been secretly enhanced by Israeli engineers, its now infamous three color camouflage scheme has not been altered in over twenty years. (*Biton Heyl Ha'Avir*)

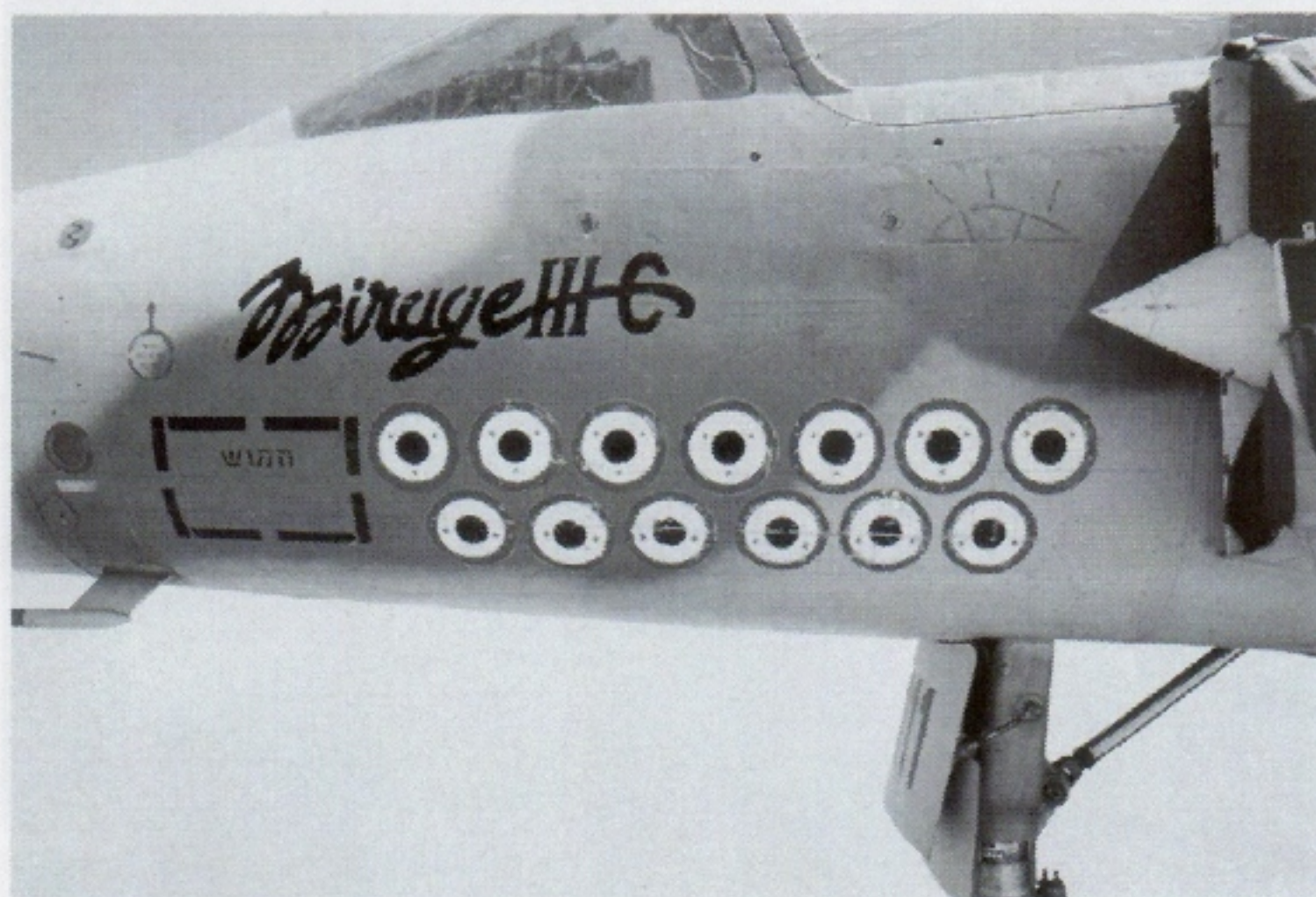


Close-up view of a modified A-4 Skyhawk, on display at an airbase in central Israel. Note rescue tab labeled **Hatzalah** in Hebrew. (Courtesy—Yoav Efrati)

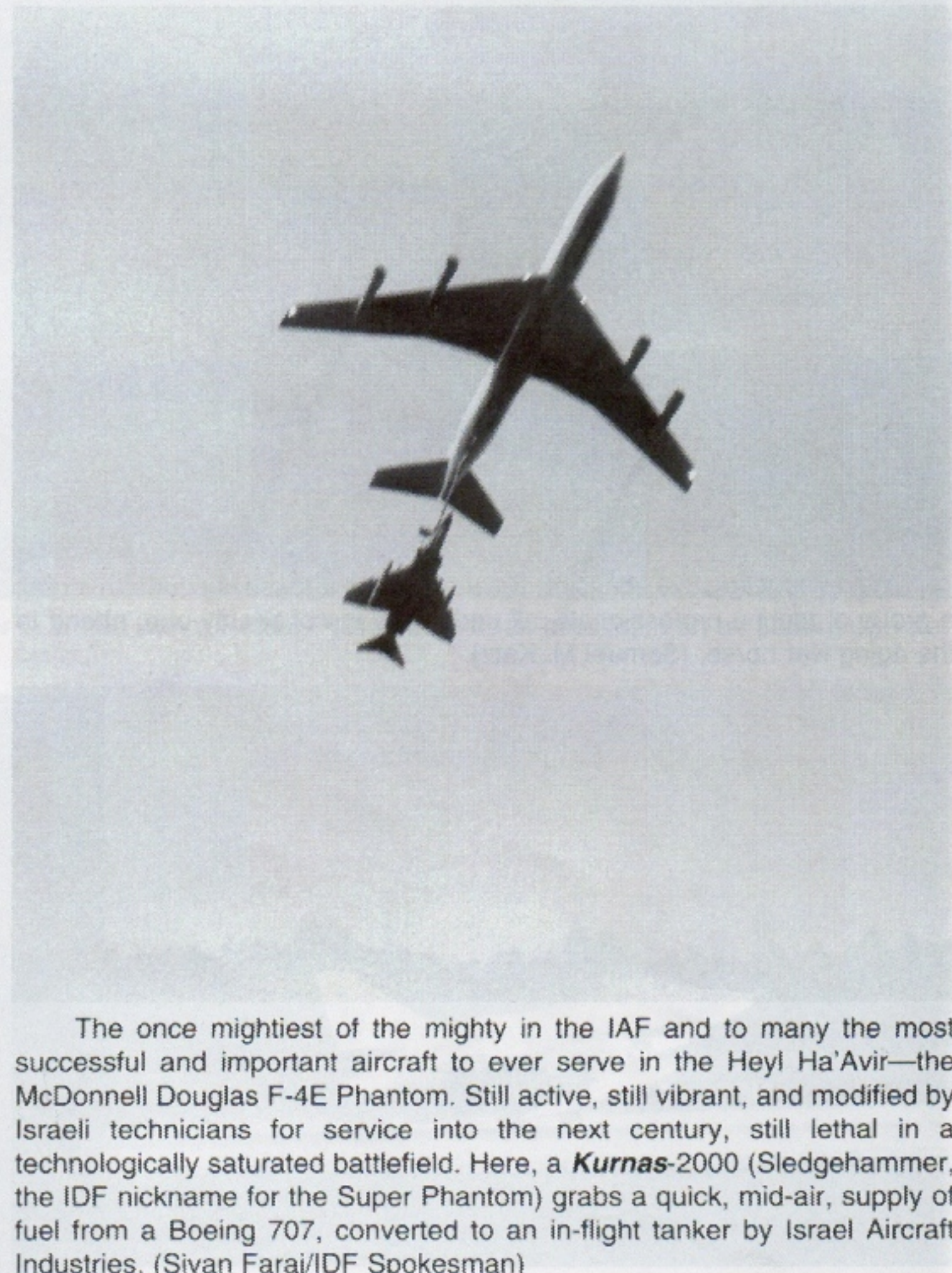




At a base in southern Israel, a Mirage IIIC air-superiority aircraft (superior with 13 kills) which has been extensively modified by Israel Aircraft Industries, is displayed on Independence Day. (IDF Spokesman)



The top Mirage IIIC MiG and Sukhoi killer—now displayed at the IAF museum: It is the master of thirteen Egyptian and Syrian aircraft (the roundels with three stars indicate Egyptian kills, while those with two stars indicate Syrian aircraft downed). Note aircraft markings in Hebrew. (Samuel M. Katz)



The once mightiest of the mighty in the IAF and to many the most successful and important aircraft to ever serve in the Heyl Ha'Avir—the McDonnell Douglas F-4E Phantom. Still active, still vibrant, and modified by Israeli technicians for service into the next century, still lethal in a technologically saturated battlefield. Here, a *Kurnas-2000* (Sledgehammer, the IDF nickname for the Super Phantom) grabs a quick, mid-air, supply of fuel from a Boeing 707, converted to an in-flight tanker by Israel Aircraft Industries. (Sivan Faraj/IDF Spokesman)

Parked next to the former IAF air superiority aircraft, the Mirage IIIC (the true forebear to the Kfir family of fighters), an F-15 Eagle awaits its permission for take-off. (*Biton Heyl Ha'Avir*)



On a rain soaked tarmac at an anonymous air force base, a **Kurnas** (Sledgehammer) awaits a pilot, a few thousands pounds of ordnance, and a mission. (*Biton Heyl Ha'Avir*)



After completing their practice bombing run, a trio of pilots stand in awe as a pair of Super Phantoms take-off for some late afternoon flight time. (IDF Spokesman)



With the **Tzevet Karka** (ground crew), wearing white coveralls, directing a returning Sledgehammer into base, the pilot prepares for the lengthy post-flight debriefing in the squadron conference room. (*Biton Heyl Ha'Avir*)





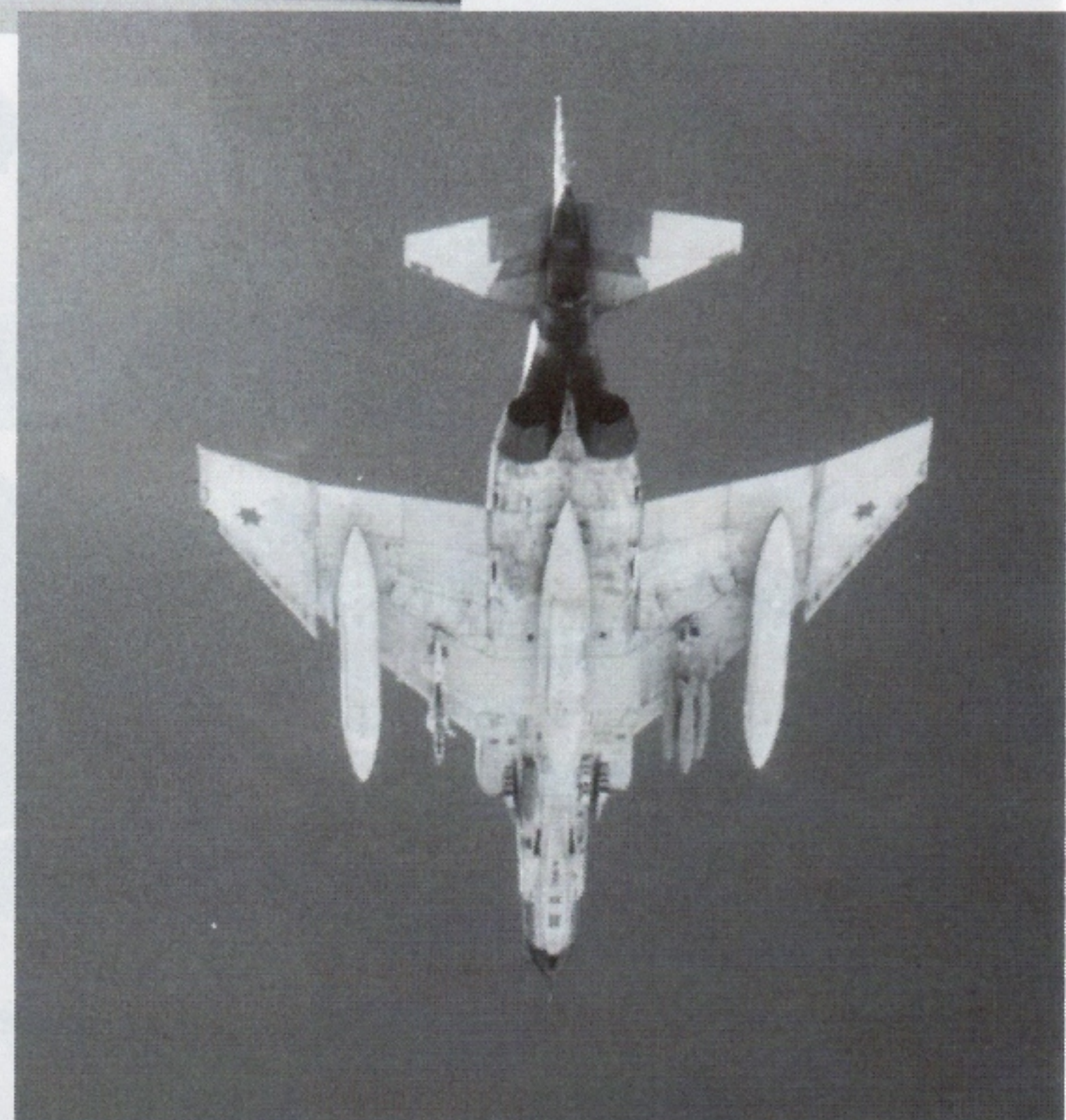
Three Super Phantoms patrol the beautiful desert wilderness of southern Israel. Although most new pilots thrive for the opportunity to "drive" an F-15 or F-16, those in the know still want to sit behind the controls of the legendary Super Phantom. (*Biton Heyl Ha'Avir*)



From its home base "somewhere" in southern Israel, an IAF F-4E Super Phantom takes off during a training exercise. (Samuel M. Katz)



With its canopy up prior to entering take-off position, a *Kurnas* crew awaits its spot on line for the quick and mighty lift-off from its base in northern Israel. Photograph offers an excellent view of the once top-secret rear-view mirrors fastened to the canopy. (*Biton Heyl Ha'Avir*)



Fascinating view of an IAF F-4E, still carrying a payload of bombs, returning to base. The IAF's Star of David emblem and the F-4E have come to personify Israel's air superiority. (*Biton Heyl Ha'Avir*)

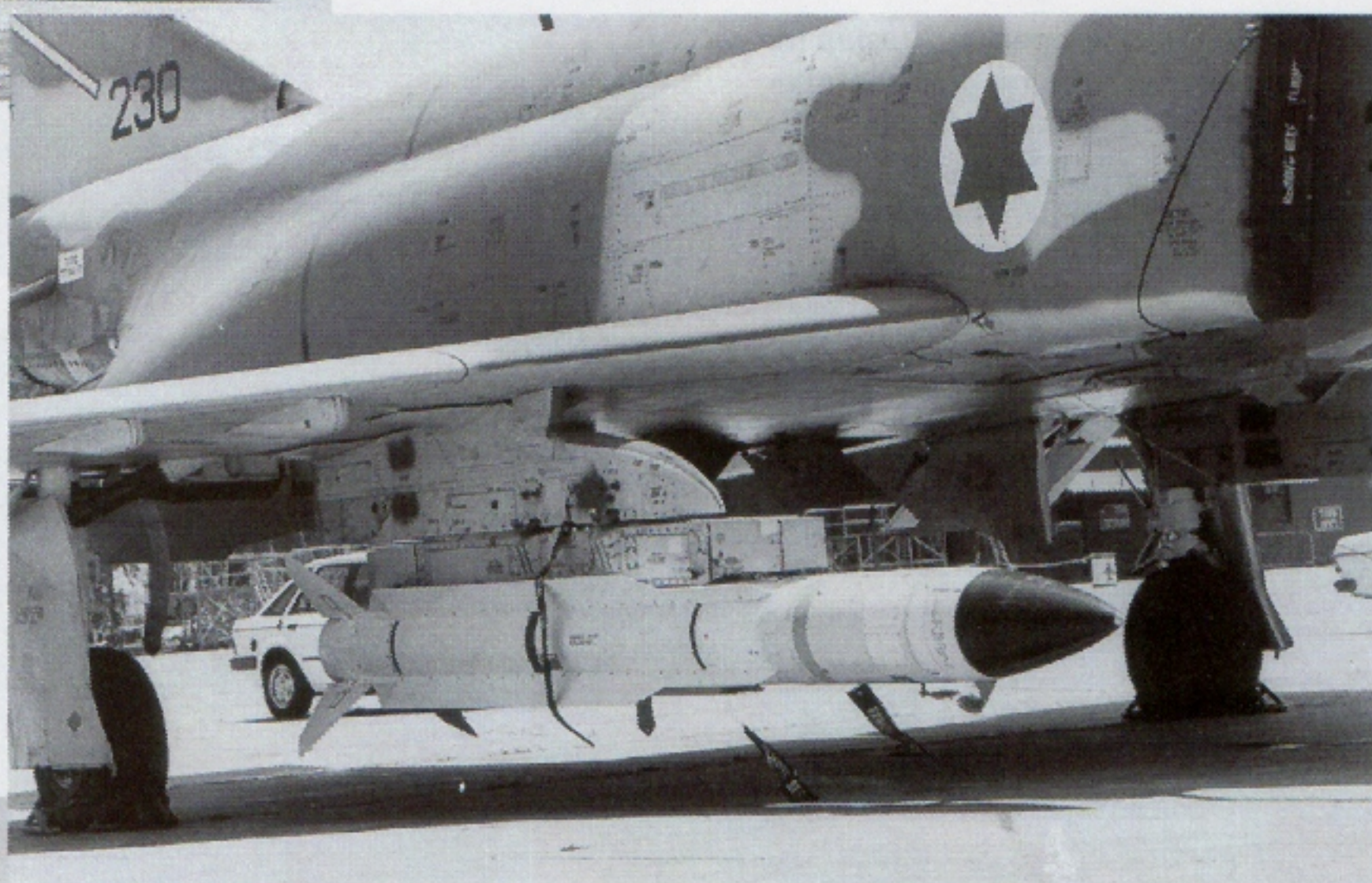


A landing shot of the **Kurnas-2000**, the Israel Aircraft Industries revamped copy of the F-4E, which will be in service into the next century. The strength and sheer destructive capability of the Super Phantom makes its new name of KURNAS [or "Sledgehammer"] a fitting title. (Sivan Faraj/IDF Spokesman)



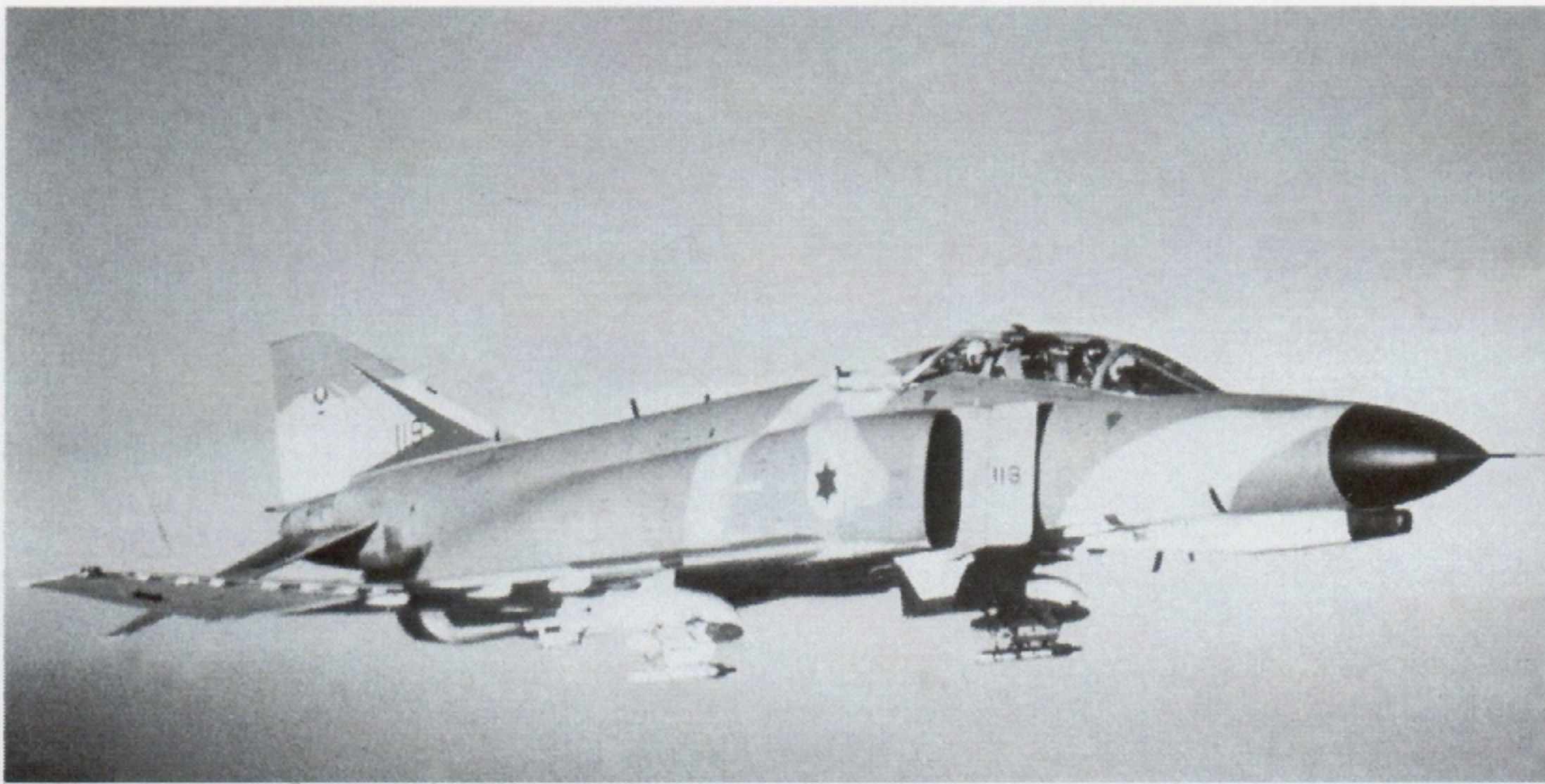
The mighty F-4E Phantom—the workhorse of the IAF for over twenty years and, most likely, twenty more—takes off from a sun baked runway in southern Israel. (IDF Spokesman)

The SAM's greatest nemesis: the AGM-78 Standard Arm "Purple Punch" anti radiation missile; the weapon which has proved its lethality during the IAF's epic blitz of the Beka'a Valley missile network in June 1982. (Michael Zarfati/IDF Spokesman)



During an Independence Day display, a **Kurnas-2000** is mocked up in full battle glory. Note refueling hook-up, rear-view mirrors to cockpit, and additional fuel tank. (Courtesy—Yoav Efrati)

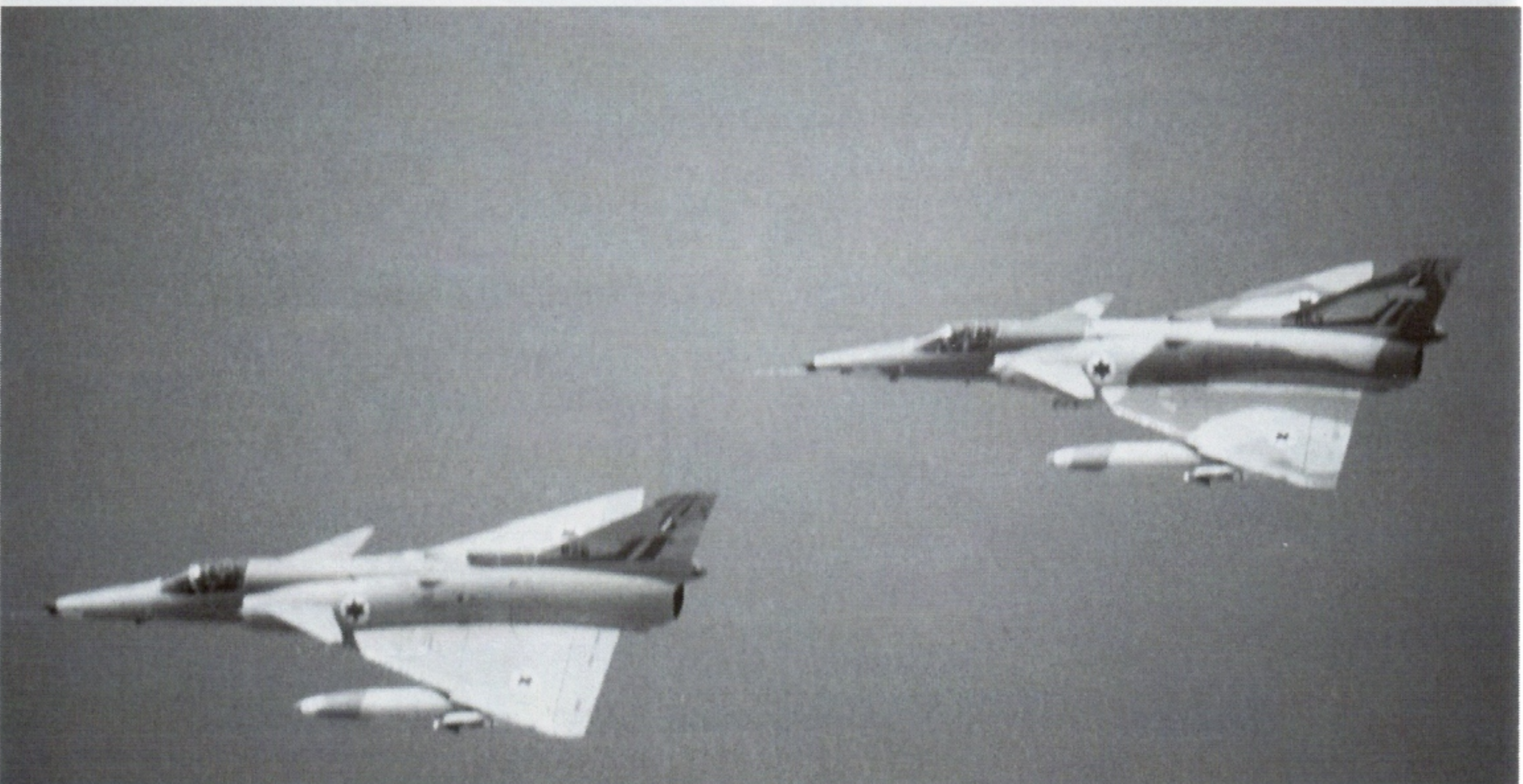




Super Phantom/**Kurnas**-2000, fully armed with a wide assortment of ordnance, heads towards its target during a "routine" counter-terrorist strike. (IDF Spokesman)



Its chute wide open, a **Kurnas** [or "Sledgehammer"] returns to base after another "job well done." Although now in its 25th year of service with the IAF, the Super Phantom is still a front line combat aircraft. (IDF Spokesman)



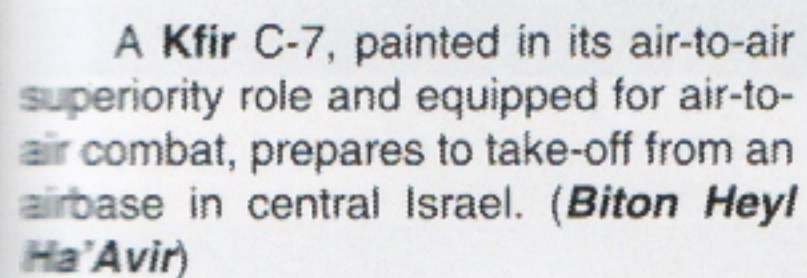
Two **Kfir** C-7s, the last variant of the "Lion's Cub" to be produced by Israel Aircraft Industries, fly in formation above the mountains of northern Israel. The **Kfir** in the gray scheme is in air-superiority role, while the camouflaged aircraft is in its ground attack scheme. (**Biton Heyl Ha'Avir**)



Two **Kfirs**, armed with air-to-air missiles, patrol the skies over northern Israel. Note additional fuel tanks carried in case some additional combat aerial time is required. (*Biton Heyl Ha'Avir*)



A master ground crewman readies his pilot's **Kfir** C-7 for a training flight just after dawn at an anonymous airbase in southern Israel. Note that **Kfir** is in a ground attack camouflage scheme. (*Biton Heyl Ha'Avir*)



The beginning of a sand storm does not deter the **Kfir** and his pilot from a few hours flight time in southern Israel. A great boost to the image of the **Kfir** was the decision of the U.S. Navy to use the aircraft in an adversarial role in its Top Gun School. (*Biton Heyl Ha'Avir*)





Armed with **Shafrir 2** air-to-air missile, two **Kfir C-7s** patrol the skies of northern Israel—the snow capped slopes of Mt. Hermon are visible in the background. (*Biton Heyl Ha'Avir*)



The Israeli response to generous and fickle arms suppliers: the **Kfir** family of fighter-bomber aircraft. First unveiled in 1975, the **Kfir** [or "Lion's Cub"] is an extensively redesigned Mirage 5; later variants, however, were truly unique aircraft. Note black and orange triangle on wings and tail which differentiate the aircraft from Mirages flown by Arab air forces. (Samuel M. Katz)



The two-seat trainer derivative of the **Kfir C-2**, known as the **Kfir TC2**. It has a longer nose than the C-2 in order to house some of the systems originally fitted to the fuselage to make room for the second pilot. Note canards located just behind the air intakes and extended wing leading edge. (Samuel M. Katz)



After a successful hour in the air, a **Kfir C-7** makes his parachute-brake slow roll on the tarmac at an anonymous airbase in Israel. The post-flight debriefing, in which the flyers are quizzed and examined about every aspect of their flight, is almost as lengthy as the actual sortie. (*Biton Heyl Ha'Avir*)



Two **Kfir C-7s**, bedazzled in their desert camouflage scheme, are readied for take-off from their base in southern Israel. (*Biton Heyl Ha'Avir*)



A mixed flight of IAF warplanes: two **Kfir C-7s**, an **F-15** and an **F-16** fly low over the Tel Aviv suburb of Ramat Gan prior to pre-Independence Day fly over rehearsals. (Ofer Karni/IDF Spokesman)





Head on view of the **Kfir** C-7 fighter bomber, with its full ordnance payload of air-to-air missiles, bombs and, for long operations, external fuel tanks, clearly displayed. Although a small aircraft, its combat radius of 737 miles, complete with a 2,600lb. bomb load, as well as air-to-air missiles and additional fuel tanks, make it a sturdy and heavy-lifting fighter bomber. (Sivan Faraj/IDF Spokesman)



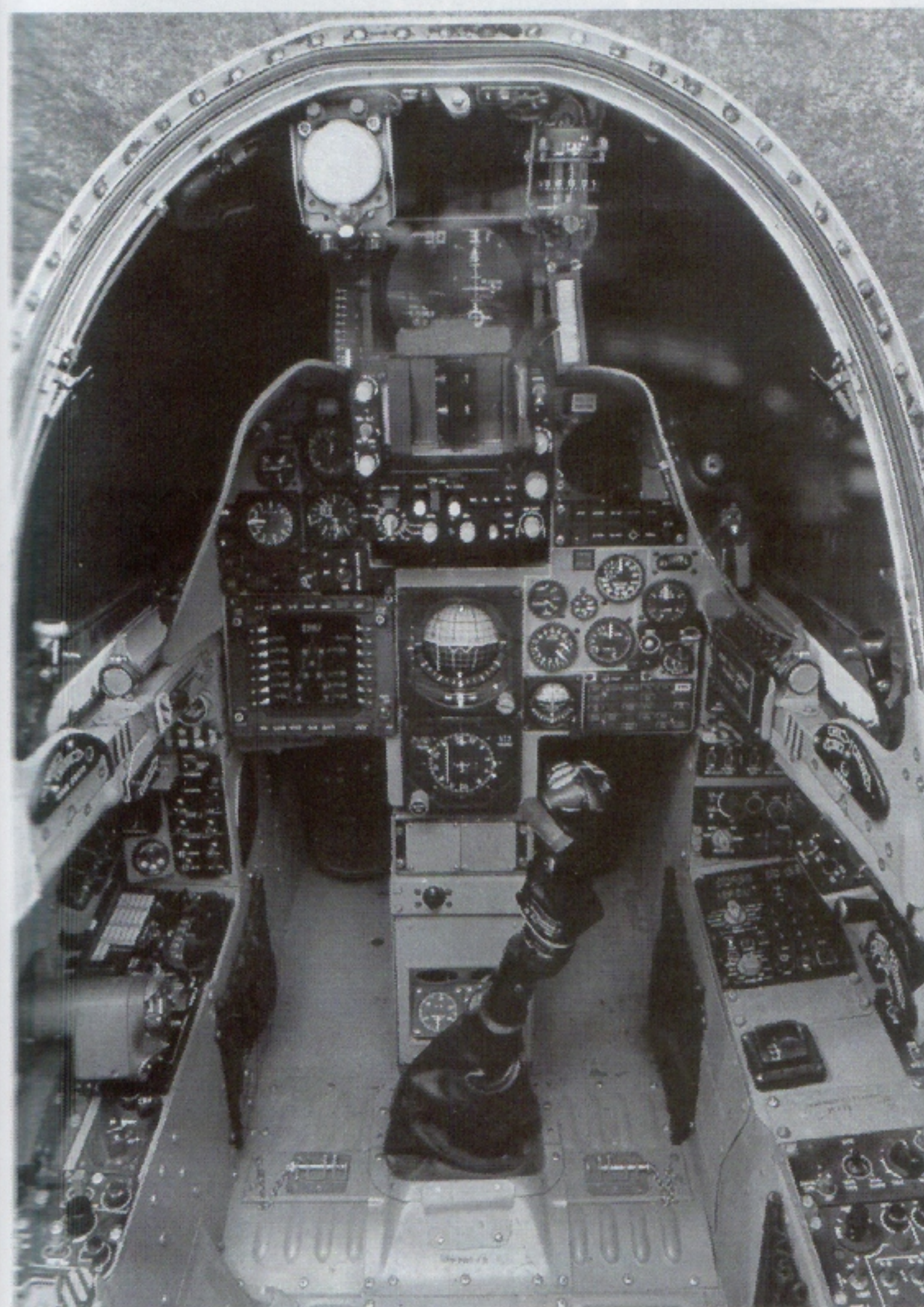
A **Kfir** C-7 fighter-bomber and its ejection seat apparatus is displayed at an anonymous airbase in southern Israel. Note **Shafir** 2 air-to-air missiles carried on pylon. (IDF Spokesman)

A corporal and master technician goes over her checklist prior to taking care of her ship—a **Kfir** C-7. There is a saying in the IAF—"Behind every great plane stands a great woman!" (IDF Spokesman)

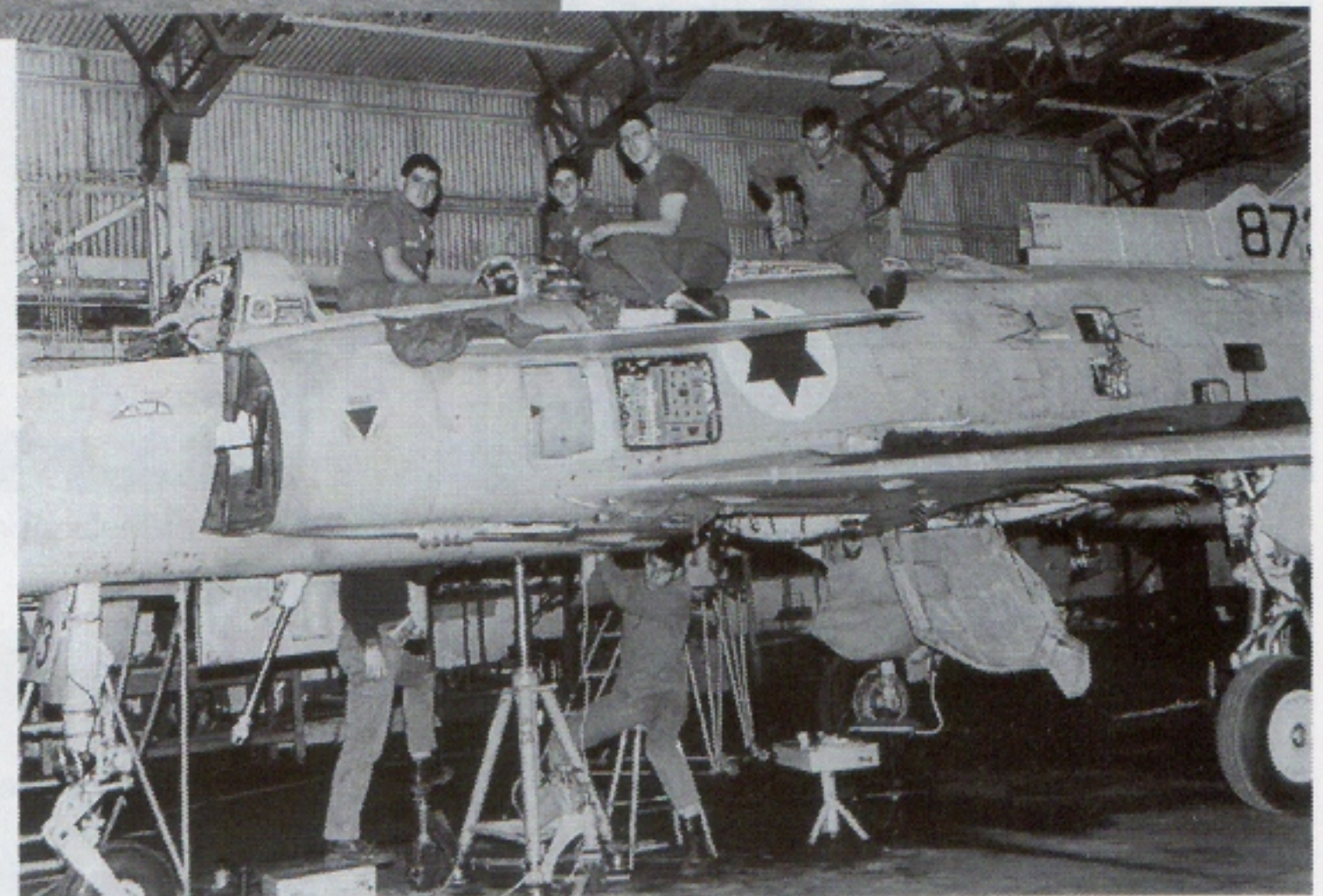




A *Kfir* C-7, on display at an anonymous airbase in southern Israel, shows off its fuel-tank, missile and bomb-carrying capabilities. Of interesting note is the new, softer, tri-color camouflage scheme now applied to both the *Kfir* C-7 (as featured here), as well as on the F-16. (Courtesy: Yoav Efrati)



Intimate view of the *Kfir* C-7 cockpit, in which the advanced digital and H.U.D. panels are clearly seen. (Courtesy: Israel Aircraft Industries)



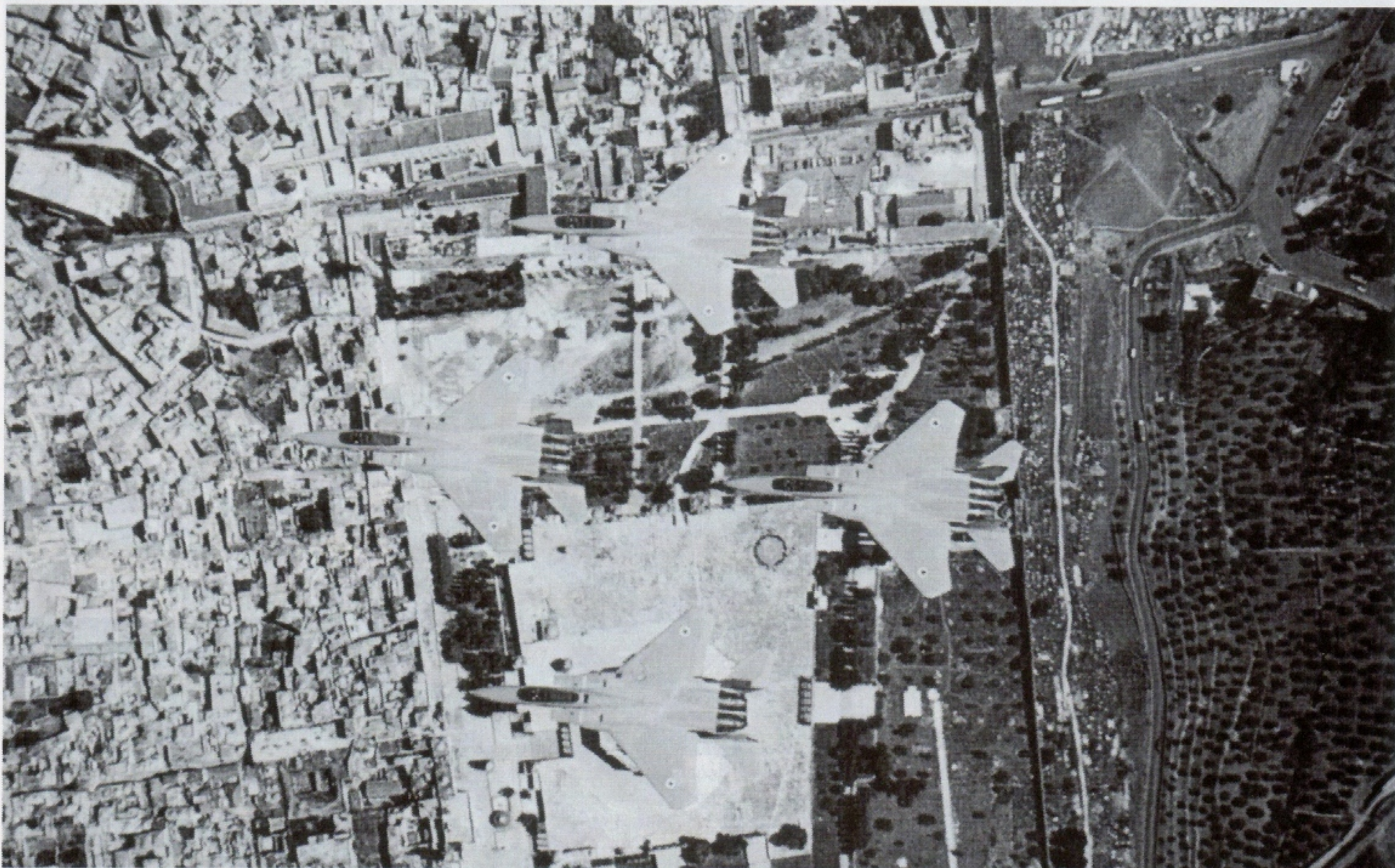
At an anonymous airbase in central Israel, mechanics labor at the electronic skeleton of the *Kfir* C-7 fighter. The ability of the IAF to achieve its mastery of the skies is as much a statement to the dedication and talents of the ground crews as the courage and skill of the flyers. (IDF Spokesman)



A *Kfir* C-7, one of the more beloved aircraft to ever fly the IAF's colors, banks a sharp right turn over the Dead Sea, during a routine patrol of the skies over southern Israel. The aircraft is adorned in a light gray air superiority scheme. Note additional fuel tank carried, along with two Python-3 air-to-air missiles. (IDF Spokesman)



## *The Skies The Limit—Israel's Modern Fighter Bomber Fleet*



During pre-Independence Day fly-by rehearsals, a formation of McDonnell Douglas F-15 Eagles shatter a few windows and capture the imaginations of thousands during a pass over Jerusalem. (IDF Spokesman)



An Israel Aircraft Industries (IAI) modified Boeing 707 turned into a mid-air gas station fuels up an F-15 Eagle. The mid-air refueling capabilities have greatly stretched the IAF's operational envelope. (Michael Giladi/IDF Spokesman)



A row of mighty Eagles—on the tarmac at their temporary parking spots at an anonymous airbase in central Israel. The air-to-air superiority markings are standard for the IAF's Eagles. (*Biton Heyl Ha'Avir*)





The top interceptor in the IAF order of battle: the McDonnell Douglas F-15 Eagle returns to base following a late afternoon patrol. (IDF Spokesman)



**Tzipor Ha'Esh** or "Firebird"—an F-15 trainer is issued with the obligatory thumb's up from the ground crew before a training flight. The F-15 is the first choice for many hopefuls in the IAF Pilot's Course, although very few have the temperament and skill to become Eagle drivers. (*Biton Heyl Ha'Avir*)



An IAI modified Boeing 707 tanker blazes a line of thirsty F-15s over the Israeli capital of Jerusalem. Visible in the distance is the Dome of Rock Mosque on Temple Mount and the Western Wall. (*Biton Heyl Ha'Avir*)





Wearing his G-suit, an IAF pilot looks on at his Eagle, nicknamed "Hurricane," as it undergoes maintenance at an anonymous Israeli airbase. (*Biton Heyl Ha'Avir*)

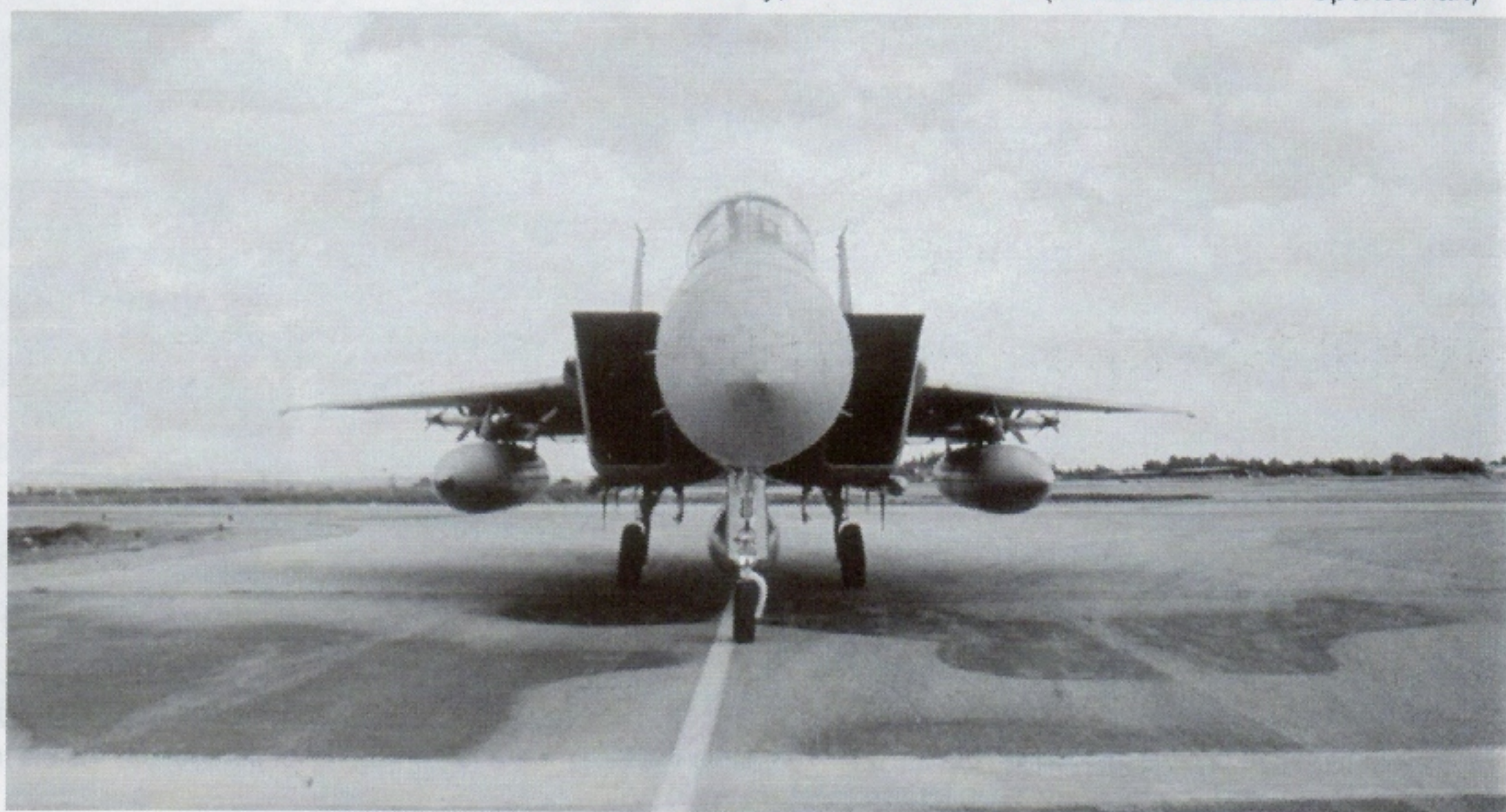


During air-to-air maneuvers, an F-15 Eagle makes a rolling turn to set itself into advantageous firing position. (*Biton Heyl Ha'Avir*)



An early morning wake-up call—IAF style. Before most civilians are heading off to work and most school children awake, the roar of Mach.2 capable engines shatters ear drums at airbases all over Israel. Here, in the center of the country, an F-15 takes off. (Michael Giladi/IDF Spokesman)

Armed with an array of Sidewinders and equipped with external fuel tanks, an F-15 awaits its pilot before flying air support for an anti-terrorist raid in Lebanon. (*Biton Heyl Ha'Avir*)







An F-15 trainer, named **Chetz Mi'Keshet** [loosely translated as "An Arrow from the Bow"], takes off from a base in central Israel for a "routine" patrol of the Israeli skies. Note two roundels painted below canopy, indicating that the aircraft has already blown two MiGs out of the sky in dogfights over Lebanon during "Operation Peace for Galilee." (**Biton Heyl Ha'Avir**)



During Independence Day celebrations, an F-15 named **Kommando** [or "Commando"] is put on proud display with the varied ordnance this mighty aircraft can carry. Note the six red, white and black roundels painted on the fuselage, indicating that this F-15 is an ace plus one! (IDF Spokesman)



The ground crew of an F-15 named **Ra'am** [or "Thunder"] ready their bird for take-off on a runway strip. Just "another" aircraft, and "another" pilot, this bird is responsible for the downing of four Syrian MiGs. (IDF Spokesman)



Left alone with his thoughts, an F-15 driver slowly rolls out his aircraft prior to take-off from an anonymous airbase in central Israel. Note "Eagle" insignia on tail. (IDF Spokesman)





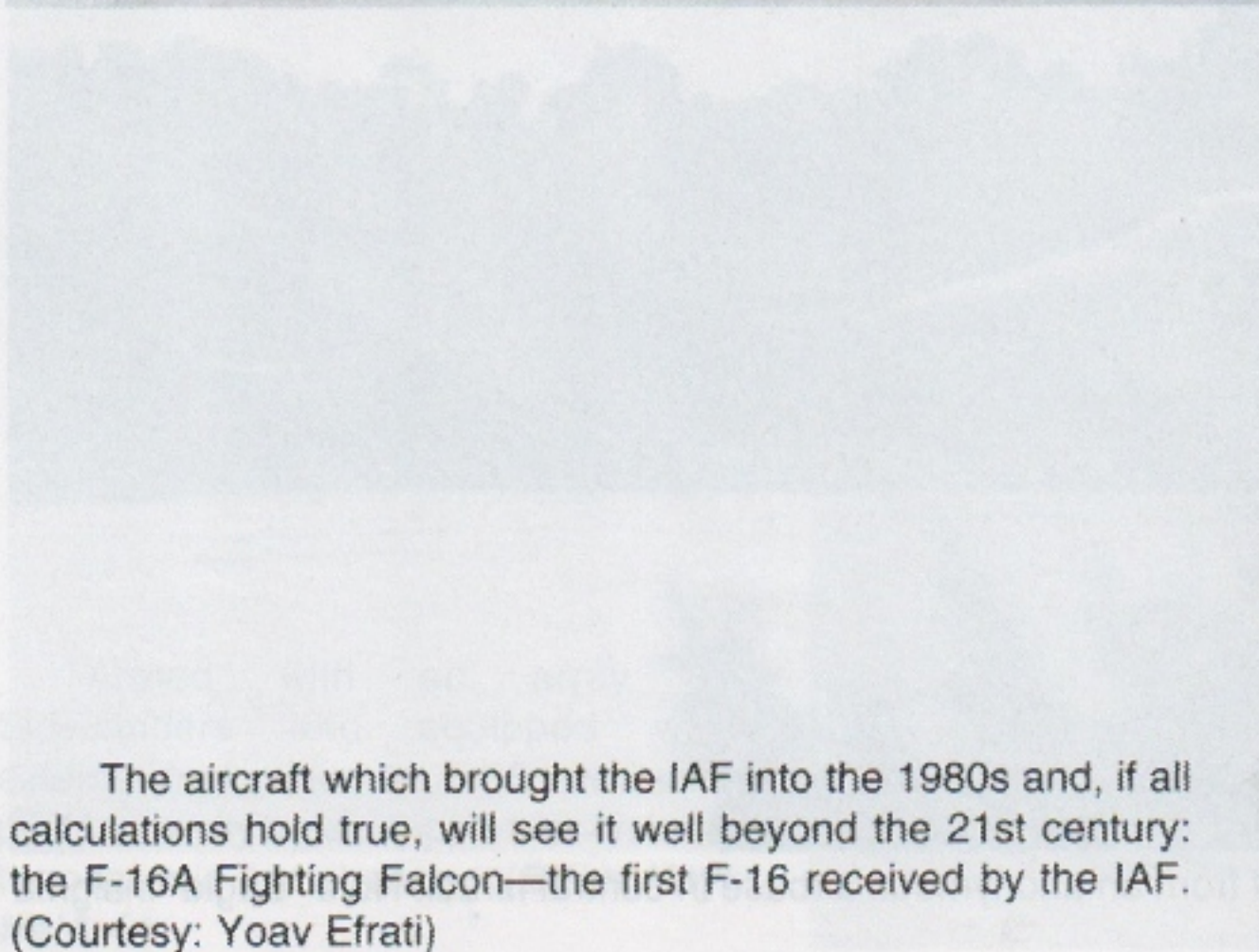
An F-15 nicknamed "Commando" undergoes some much needed maintenance at an anonymous airbase in central Israel. The ability of IAF technicians, mechanics and ground crews to keep the high-tech, Mach.2 complexities in the air has been as much a factor in the IAF's success story as its legendary pilots and daring and innovative commanders. (IDF Spokesman)

Overall can carry. Note the six red and black roundels painted

An F-15D, the two-seat training version of the F-15C, flies high above the plains of central Israel during a routine patrol. Its name is **Markia Schakim**, or "Sky Blazer." (IDF Spokesman)



An IAF F-15A, named **Ra'am** [or "Thunder"] awaits its spot for take-off at an anonymous airbase in central Israel. Note markings for 4 Syrian MiG kills and aircraft named **Bazak** (or "Flash") in background. (IDF Spokesman)



The aircraft which brought the IAF into the 1980s and, if all calculations hold true, will see it well beyond the 21st century: the F-16A Fighting Falcon—the first F-16 received by the IAF. (Courtesy: Yoav Efrati)





Wearing their white coveralls and bright red vests, an F-16 Fighting Falcon's squadron ground crew prepare their aircraft through the choreographed procedure of guiding the aircraft to the flightline. (*Biton Heyl Ha'Avir*)



An F-16 pilot receives the O.K. from the ground traffic controller during an early morning scramble "somewhere" in central Israel. (*Biton Heyl Ha'Avir*)

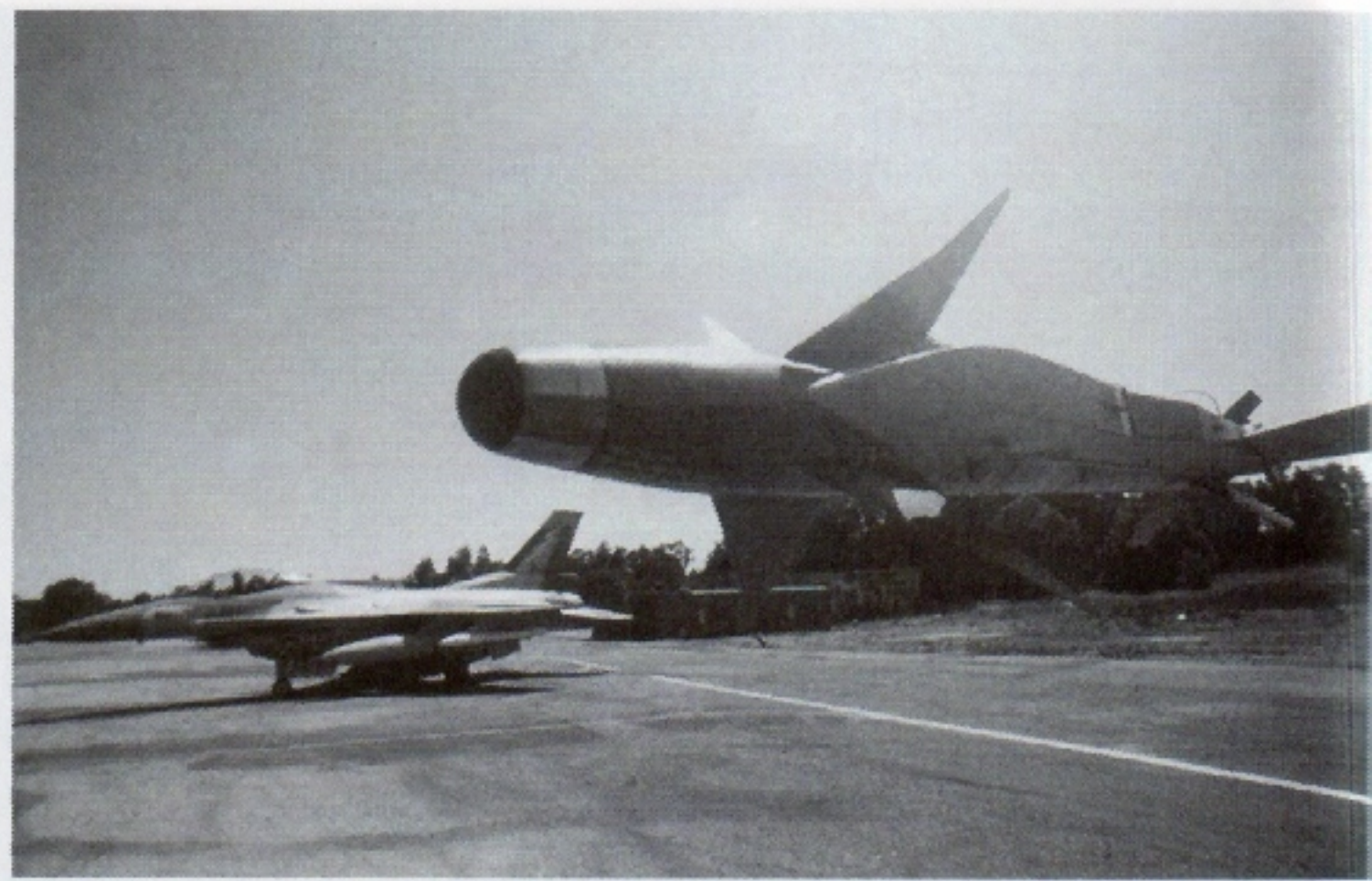


An F-16 Fighting Falcon takes off for an early morning flyby of central Israel—note aircraft only carrying one Sidewinder air-to-air missile. (IAF)





An F-16D Fighting Falcon sits inside a protective shelter while the student pilot awaits the arrival of his co-pilot. (*Biton Heyl Ha'Avir*)



Close-up view of the business end of an AIM-9 Sidewinder adorning the wing tip of an F-16 Fighting Falcon. (*Biton Heyl Ha'Avir*)



Close-up view of an F-16 pilot, as he guides his bird out of its protective shelter for a night time excursion into the skies high above Israel. (*Biton Heyl Ha'Avir*)



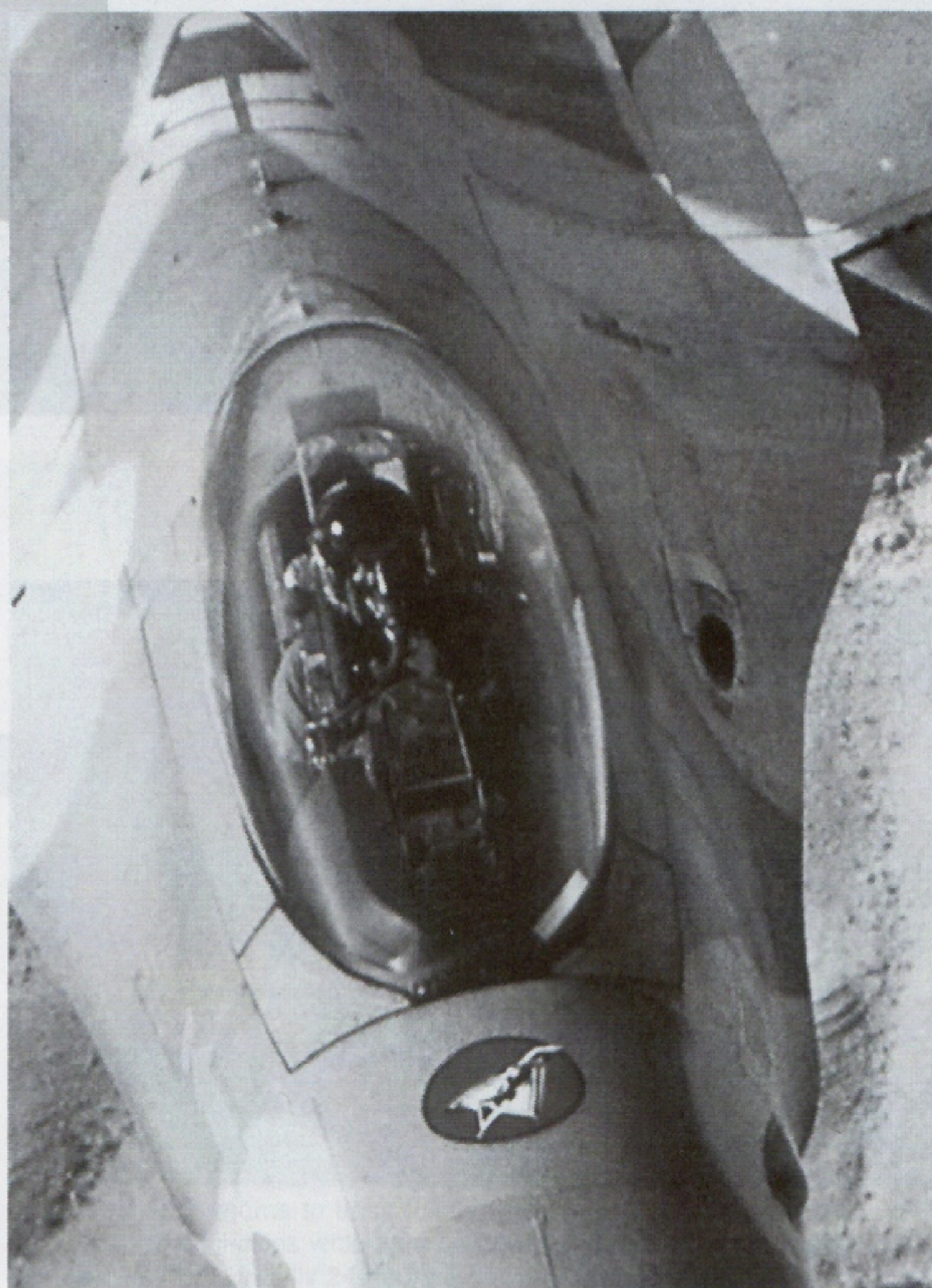
Majestic view of three F-16s, taken from the cargo hold of an IAF C-130 Hercules, high above the beautifully carved desert of southern Israel. (*Biton Heyl Ha'Avir*)



A veteran of Lebanon and a MiG killer—an F-16 Fighting Falcon sits on the tarmac at an airbase in southern Israel. Note Syrian Air Force roundel painted on below cockpit window. (*Biton Heyl Ha'Avir*)



The Fighting Falcon and the Star of David: the aircraft designated the most popular IAF aircraft of the 1980s that still promises to be in service throughout the first decade of the 21st century. (Michael Giladi/IDF Spokesman)



Close-up view of the cockpit of an F-16 with a unique location displayed for the IAF squadron emblem. (*Biton Heyl Ha'Avir*)





The pilot of an F-16 Fighting Falcon checks with the ground controller for the thumbs up and permission for take-off. (*Biton Heyl Ha'Avir*)



A young Captain undergoes his standard pre-flight check list before leading his squadron on an operational patrol. Note AIM-9L/M Sidewinder—always ready for possible action. (*Biton Heyl Ha'Avir*)



At a protective shelter at an anonymous air base in central Israel, a groundcrew mechanic makes the final adjustments to an F-16 prior to "O.K'aying" it for take-off. (IDF Spokesman)



During full-battle rehearsals, an F-16 is scrambled and protecting its airbase in just a matter of minutes; note landing gear retracting and the General Electric F110-GE-100 engine with its 7,344 kilograms of thrust power. (IDF Spokesman)



At an airbase in central Israel, the newest addition to the IAF's family of F-16 fighter bombers, the two-seat F-16D, is displayed for the world's press with full ordnance. (Sivan Faraj/IDF Spokesman)



A newly acquired F-16D is inspected—and admired—inside its protective shelter. The two-seat F-16Ds have a dorsal spine housing Israeli-made avionics apparently for anti-SAM "Wild Weasel" operations. (Yuval Navon/IDF Spokesman)



An F-16D taxis for a spot on the runway prior to an operational patrol from its protective shelter. (Ro'ey Cohen/ IDF Spokesman)



An F-16D returns to base following a midnight training scramble. IAF airbases are mini-cities which are busy with the roar of jet engines and the aroma of jet fuel virtually 24-hours a day. (*Biton Heyl Ha'Avir*)





An F-16D takes off during a training flight—Because *it* was the F-16 that obliterated Iraq's nuclear reactor, many young eighteen-year-olds lucky enough to have made it *into* pilot's course, most express a desire to fly the Fighting Falcon. (*Biton Heyl Ha'Avir*)



An F-16D makes a low-level flyby past Israel's Mediterranean coastline during a routine training mission—note external fuel tanks carried for flight. (IDF Spokesman)



A historic moment in the history of the IAF and Israel's aerospace industry—the Israel Aircraft Industries Lavi seen here during its inaugural take-off on January 1, 1987, at IAI headquarters at Lod. (IDF Spokesman)





With external fuel tanks and 20mm rocket pods, a Skyhawk patrols the skies of northern Israel. Although a slower and far less maneuverable aircraft than the F-16, the Skyhawk is a sturdy warrior still revered in IAF circles. (*Biton Heyl Ha'Avir*)

On the take-off waiting list at an anonymous airbase in central Israel, the beloved Skyhawk awaits permission from the control tower before heading into the skies for a training flight. Its scheme has remained the same since the first aircraft were received in the very late 1960s. (IDF Spokesman)



The Buddy System—IAF style! Over the hills of Galilee, a pair of Skyhawks, one armed for air-to-air combat with Python 3 air-to-air missiles, and the other carrying additional fuel fly a low-level patrol. (*Biton Heyl Ha'Avir*)

The old war horse of the Heyl Ha'Avir: the Skyhawk. It is seen here armed with rocket launchers flying over the snow-capped peaks of Mt. Hermon. (*Biton Heyl Ha'Avir*)







A flight of four Sledgehammers (the IAF nickname for the Super Phantom) fly high above central Israel prior to a practice attack run. (*Biton Heyl Ha'Avir*)



Mid-air refueling over northern Israel—two Skyhawks help each other out during a routine patrol. (*Biton Heyl Ha'Avir*)

Famed in the IAF's history books for its maneuverability, power, and ability to withstand punishment, a flight of Super Phantom/Sledgehammers peel off in formation before making a low-level run against targets during maneuvers in central Israel. (*Biton Heyl Ha'Avir*)







A **Kurnas** 2000, seen here in an air superiority role with an underbelly bristling with air-to-air missile flies the treacherous stretch of air space above northern Israel. (*Biton Heyl Ha'Avir*)



Close-up of the **Kurnas** 2000—improved avionics, improved ECM capabilities—and same Israeli pilots. Still a mighty piece of Mach.2 firepower! (*Biton Heyl Ha'Avir*)



A colorful **Kfir** C-7, "decorated" in a gray air superiority scheme although equipped with camouflaged fuel tanks patrols the skies over northern Israel. Note squadron emblem clearly visible. (*Biton Heyl Ha'Avir*)



In a low-level flyby of Jerusalem, the Israeli capital, a flight of **Kfirs** rattle several windows and drawn a great deal of attention. (*Biton Heyl Ha'Avir*)





A **Kfir C-7** pilot confers with his chief ground mechanic prior to take-off. A unique, sometimes incredible working relationship exists between Israeli airmen and their ground crewmen, and women. Israeli pilots have absolute faith in the men who fuel their aircraft, prepare their cockpits, and load their weapon systems. Israeli ground crews have absolute confidence in *their* pilots to return their aircraft back in one piece. (*Biton Heyl Ha'Avir*)



A stoic reminder of Jewish resolve of the past and present: three **Kfirs** make a low-level flyby of the old zealot fortress at Metzada, which was seized in A.D. 71 by the Romans after its Jewish defenders committed suicide rather than acquiesce to slavery and assimilation. (*Biton Heyl Ha'Avir*)



Flying point, a **Kfir C-7** and his partner is joined by an IAF **Kurnas** (Super Phantom) and an F-16 over the Mediterranean coastline. Unlike many air forces around the world, the IAF does not have a fighter bomber that has not seen extensive combat. (*Biton Heyl Ha'Avir*)





A dramatic view of the Israel Aircraft Industries **Kfir** C-7, the last member of the "Lion's Cub" family of combat aircraft to enter IAF service (in 1983), flying over southern Israel. Note external fuel tank carried, as well as compliment of Rafael Python 3 air-to-air missiles; also of interest is the three color camouflage scheme unique to the **Kfir** C-7 aircraft. (Courtesy: Israel Aircraft Industries)



Tarmac rush hour—IAF style. In the air, the pilots may be kings but on the ground it is the tower that rules all. During the early morning take-off line, a flight of **Kfirs** jockey for position. (*Biton Heyl Ha'Avir*)

Rare view of the IAI **Kfir** TC 2, the two seat tandem trainer of the **Kfir** family of aircraft. The Hebrew sign at the front of the cockpit says: **Ze'hirut: Chupah Nefitza** [or "Warning: Exploding Canopy"]. (Yuval Navon/ IDF Spokesman)







"*Yad Ha'Nefetz*" ("The Exploding Hand") the affectionate nickname of this McDonnell Douglas F-15 Eagle—the most capable and mightiest of aircraft to ever serve the Heyl Ha'Avir. (*Biton Heyl Ha'Avir*)



Amid the Eucalyptus trees of a northern Israeli airbase, an F-15 taxis for take-off on a sun-baked runway. (*Biton Heyl Ha'Avir*)



During NBC exercises, two Eagle drivers walk away from their bird bedecked in full *A'ba'ch* (the Hebrew acronym for NBC warfare). This scenario, which almost came to full and deadly truth during the Gulf War and the SCUD blitz, is taken very seriously by IAF planners. (*Biton Heyl Ha'Avir*)



Dramatic photograph of an F-15 Eagle, its afterburners bursting in full-glow, as it heads toward operational altitude over the northern Israeli skies for a routine, though never routine, patrol. (*Biton Heyl Ha'Avir*)



Casting a shadow on the powerfully stoic mountains of the Negev Desert, two F-15s, one a trainer and his wingman, practice ground hugging maneuvers. (*Biton Heyl Ha'Avir*)



Two fully armed F-15s, one named "Commando" and the other "Sky Blazer" fly over northern Israel; both aircraft are also proficient Syrian MiG killers as indicated by the red, white and black roundels painted underneath the cockpit. (*Biton Heyl Ha'Avir*)

A Syrian MiG pilot's worst nightmare—flying in tight formation, a hunter group of F-15 Eagles makes a menacing dive toward a group of simulated targets during air-to-air exercises. Note that several of these Eagles are confirmed MiG killers. (*Biton Heyl Ha'Avir*)







Two *Tayasim* [or "pilots"] from an F-16 Fighting Falcon squadron enter their F-16D. They wear standard Israeli copies of American flight suits, G-vests; the survival gear, however, is an indigenous design. (*Biton Heyl Ha'Avir*)



A pair of Fighting Falcons share the skies over central Israel during early morning patrol—photograph shows to advantage the Fighting Falcon's squadron markings. (*Biton Heyl Ha'Avir*)

"BREAKING FORMATION! REPEAT... BREAKING FORMATION... MIGS IN MY SIGHT!" During dog-fight maneuvers over the skies of southern Israel, a pair of F-16 enact and perfect what the real-life "show" is like—it is a call to battle they have executed with superb excellence. (*Biton Heyl Ha'Avir*)







Majestic view of an F-16, taken from the cargo hold of an IAF C-130 Hercules, high above the beautifully carved desert of southern Israel. (*Biton Heyl Ha'Avir*)



Just another day at the office as a *Kurnas* 2000 heads toward an acceptable altitude to await the remainder of the formation, a fully-loaded and armed F-16 awaits its thumbs up for take-off. (*Biton Heyl Ha'Avir*)



Although one of the most lethal aircraft in existence for low-level bombing runs, this IAF Fighting Falcon, complete in full air-to-air missile attire, flies a patrol over the precarious skies of Galilee over northern Israel. (*Biton Heyl Ha'Avir*)



Nearly becoming invisible above the cracks and ravines of southern Israel, an F-16 makes a final approach before touching down at an anonymous airbase in the Negev. (*Biton Heyl Ha'Avir*)





An F-16D returns to base after a successful training mission with only one air-to-air missile. (*Biton Heyl Ha'Avir*)



Excellent overall view of the camouflage scheme of the IAF's fleet of F-16 Fighting Falcons. (*Biton Heyl Ha'Avir*)



Somewhat out of place, and yet accepted as a member of the family, Israel's lone MiG-23 flies over the suburbs of Jerusalem side-by-side with an F-16 Fighting Falcon. (*Biton Heyl Ha'Avir*)





Its engine fueled, its control panels fully illuminated— even with Russian instructions—and its headlights lit, the IAF's MiG-23 taxis on the runway at an airbase in central Israel. (IDF Spokesman)



Laden down with enough supplies to keep the most active paratroop battalions fighting for a few days of incessant fire-fights, a C-130 Hercules takes off from a base in southern Israel with the assistance of rocket booster. (IDF Spokesman)

Its wings extended, and engine pushing the envelope of its 12,745 kilograms of thrust, the Israeli MiG-23 Flogger-B takes off for a practice flight. (Yonatan Torgovnik/IDF Spokesman)



Two CH-53 *Yasur* choppers are refueled in mid-air courtesy of a C-130 carrying additional fuel tanks. The aircraft are flying over the Sea of Galilee. (*Biton Heyl Ha'Avir*)





*Tzucit*, trainer and acrobatic aircraft, inside its protective shelter. (Samuel M. Katz)



Food for thought for any helicopter crew. A Cobra passes the remains of a Syrian Mi-8 chopper downed by Israeli fire over the Golan Heights during the last major war fought over the volcanic heights. (*Biton Heyl Ha'Avir*)



A Cobra pilot and a *Merkava* commander discuss tactics during large-scale winter maneuvers in northern Israel atop the volcanic plateau of the Golan Heights. (*Biton Heyl Ha'Avir*)





A menacing flight of Cobras swoop in for the kill during a training exercise near the Golan Heights. The Cobras were an instrumental tool in the IAF's air and land battle campaign in Lebanon, during the 1982 War. (*Biton Heyl Ha'Avir*)



Somewhat maverick in his leather flight jacket, a Defender pilot scans across the airfield at his bird, before embarking on a "routine" patrol of *Martyrland* in southern Lebanon. (*Biton Heyl Ha'Avir*)



Defender prepares to touch down in "enemy territory" after reconnoitering the area for enemy activity during anti-tank exercises in northern Israel. (IDF Spokesman)





Two Defenders kick up the desert sand while flying a "safari" mission in support of friendly forces during large-scale exercise in southern Israel. (*Biton Heyl Ha'Avir*)



**Rav-Seren** (major) and Defender pilot confers with his trusted before flying an anti-terrorist patrol over northern Israel. Note leather jacket and patch sewn on left sleeve. (*Biton Heyl Ha'Avir*)



Armed with the deadly Hellfire missile, an AH-64 Apache searches for targets, during a training exercise. Note the 'V' squadron symbol. (*Biton Heyl Ha'Avir*)

Flying in tight patrol formation, a flight of AH-64 Apaches fly a routine patrol over northern Israel. By far more powerful, faster and more powerfully armed than anything in the Arab arsenal, the IAF's acquisition of the Apache has once again pushed the IAF into a level beyond anything else that could be encountered in the region. (*Biton Heyl Ha'Avir*)





Searching the rocky shoreline off of the Lebanese coast for possible terrorist hiding spots, a Bell-212 crew make a very low-level search. (*Biton Heyl Ha'Avir*)



A Sikorsky CH-53 *Yasur*, the largest transport chopper in IAF service, is crucial to long-range operations throughout the region; it is seen here approaching the snow-capped peak of Mt. Hermon. (*Biton Heyl Ha'Avir*)

During joint maneuvers with the IDF/Navy, a *Yasur* makes a low level pass over a *Dabur* patrol boat. The coordination between all three branches of the IDF is truly remarkable and one of the reasons behind its overall success. (*Biton Heyl Ha'Avir*)







A force of heavily armed paratroopers deploy from a CH-53 **Yasur** in northern Israel. Replacing the Super Frelon as the IAF's heavy transport helicopter, the CH-53 has been electronically overhauled and improved for service into the next century. (Alex Libek/*Bamachane*)



Well camouflaged for service inside the inhospitable confines of the desert, two CH-53 raced down towards a gorge to unload a force of infantrymen during assault exercises. (*Biton Heyl Ha'Avir*)



Although somewhat out of its element above land and above the Dome of the Rock mosque in Jerusalem, a SA 365 Dauphin 2 gets acclimated with the terrain of the Israeli landscape. (*Biton Heyl Ha'Avir*)

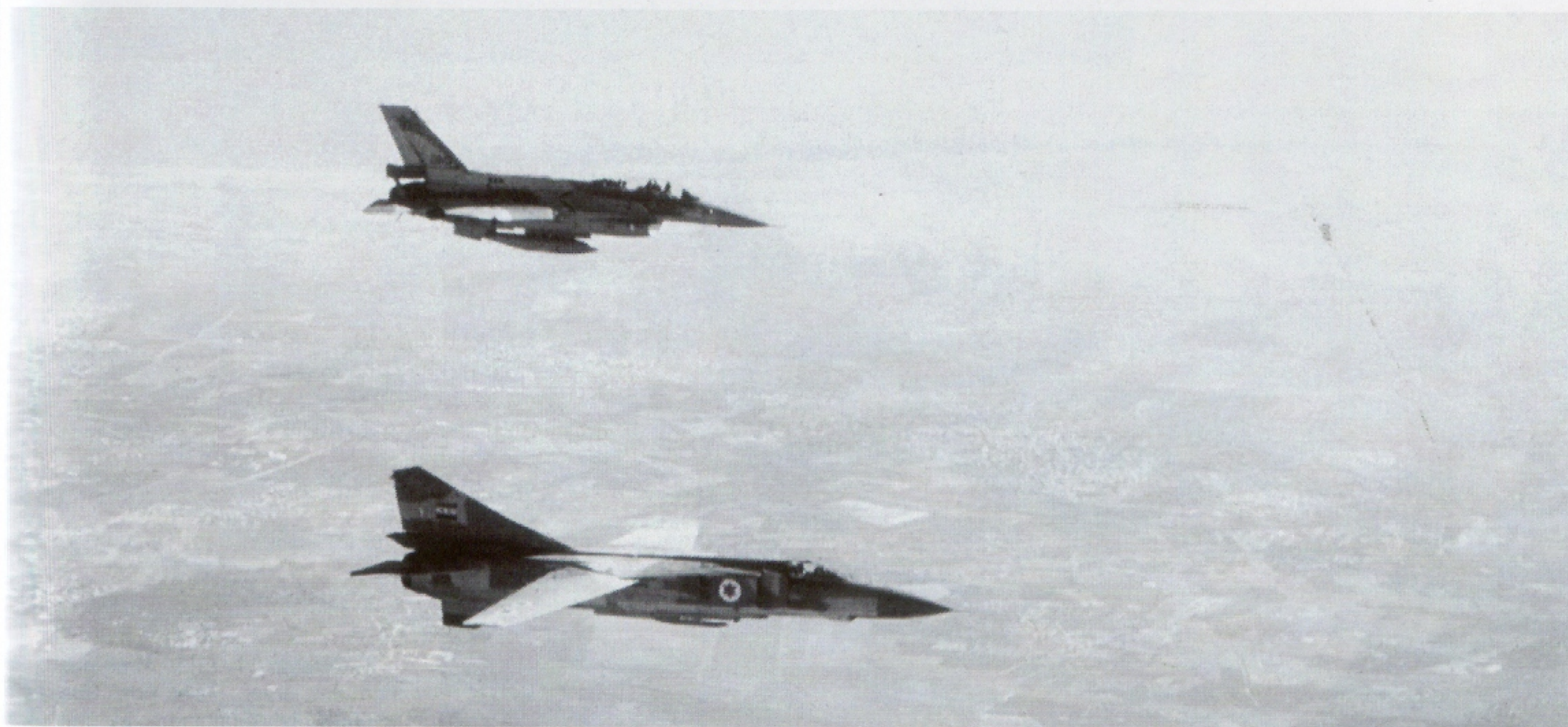
Its muddy brown camouflage scheme providing an interesting blend into the snow covered peaks of Mt. Hermon, a CH-53 **Yasur** makes its final landing approach to a forward IDF position near Syrian lines. The ability of the CH-53 **Yasur** to supply IDF forces in the field through any climatic conditions and terrain makes it an invaluable battle tool. (*Biton Heyl Ha'Avir*)



The prototype of what was touted to be the IAF's fighter-bomber of the future—the Lavi [or "Lion"]. Over-budget and opposition from American aircraft manufacturers eventually shot down this ambitious and technologically advanced project. (Biton Heyl Ha'Avir)



The Israel Aircraft Industries Lavi seen here during its inaugural flight on January 1, 1987, at IAI headquarters at Lod. Its arrival sparked pride among IAF officers who eagerly anticipated flying a truly remarkable home-grown aircraft—its combination of F-16 and *Kfir* designs, together with top-secret and highly advanced Israeli avionics—of their own but it was, however, too expensive and eventually shelved. (Biton Heyl Ha'Avir)



Armed to the teeth, an F-16 escorts a one-time Syrian MiG-23 Flogger-B which defected to Israel on October 11, 1989; now, with its Star of David emblem, it is a welcomed member of the *Heyl Ha'Avir*. (IDF Spokesman)





Still in its Syrian Air Force camouflage scheme but in the hands of Major R., a veteran of **Heyl Ha'Avir** test pilot and adorned with the Star of David, the IAF's sole copy of the MiG-23, awaits the green light for take-off. (IDF Spokesman)

A sight which, it can be assumed, not a single Israeli Air Force officer ever thought he'd witness: an IAF MiG-23 takes-off in dramatic fashion for a ceremonial flyby on Air Force Day. (IDF Spokesman)



October 11, 1989. At an airstrip in northern Israel, Major Adel Bassem's MiG-23 is examined by amused soldiers and highly curious air force officers. (IDF Spokesman)



Israel's MiG-23 fires up its Tumansky R-29B turbojet engine prior to take-off from its new home somewhere in central Israel. (*Biton Heyl Ha'Avir*)



The new markings on the wing of an old foe. (IDF Spokesman)



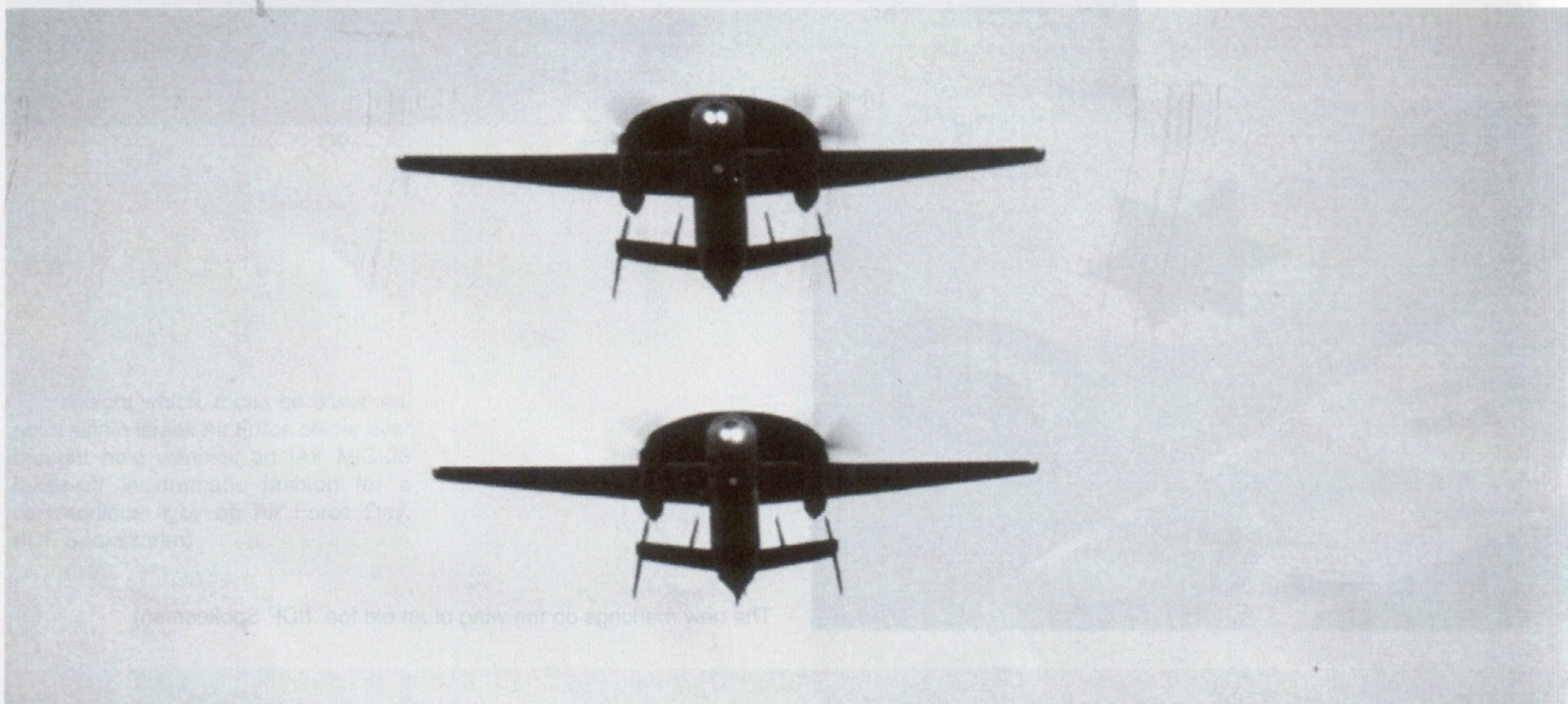
Escorted by two very capable aircraft, an IAF MiG-23 Flogger-B joins a formation of an F-15 Eagle (left) and the F-16 Fighting Falcon. (Yuval Navon/ IDF Spokesman)



## The Support Craft—An Air Force Doesn't Survive By Mach.2 Alone!



"Decorated" in its nondescript grayish blue scheme, a **Ayn Ha'Netz** [or "Hawkeye"] is displayed at an airbase in central Israel during Independence Day celebrations. (Michael Giladi/IDF Spokesman)



Two Grumman E-2C Hawkeyes, the IAF's AWACS and C<sup>3</sup> aircraft, perform a flyby of an anonymous airbase in northern Israel prior to landing for fuel and new orders. (Sivan Faraj/IDF Spokesman)



Although its rotating dish makes it a cumbersome looking aircraft, an E-2C glides into a smooth and uneventful landing at an anonymous airbase in southern Israel. (Samuel M. Katz)



An IAF E-2C Hawkeye crew, dressed in their flight suits and survival vests, prepare to enter their AWACS craft and fly a C<sup>3</sup> mission over the skies of central Israel. (*Biton Heyl Ha'Avir*)



After circling the skies of the Middle East in search of enemy targets and air activity, a E-2C Hawkeye makes an uneventful landing back at base. (Samuel M. Katz)



Awaiting their order to stand up and enter the giant confines of the C-130 Hercules, a platoon of paratrooper reservists catch up on local news and sports on the tarmac at an anonymous airbase in central Israel. (Michael Giladi/IDF Spokesman)

During large-scale assault maneuvers, a force of *Tzanhanim* [or "Paratroopers"] deploy from the C-130 Hercules. The exercise is almost a virtual copy of the Entebbe rescue, in which the C-130 proved itself to be a most capable addition to the IAF. (Michael Zarfati/IDF Spokesman)







During low-level re-supply rehearsals, a C-130 acclimates itself to the winding hills of the Negev Desert before making a final approach to a company of hungry *Golani* infantrymen. (*Biton Heyl Ha'Avir*)



Laden down with enough supplies to keep the most active paratroop battalions fighting for a few days of incessant fire-fights, a C-130 Hercules takes off from a base in southern Israel with the assistance of rocket booster. (IDF Spokesman)



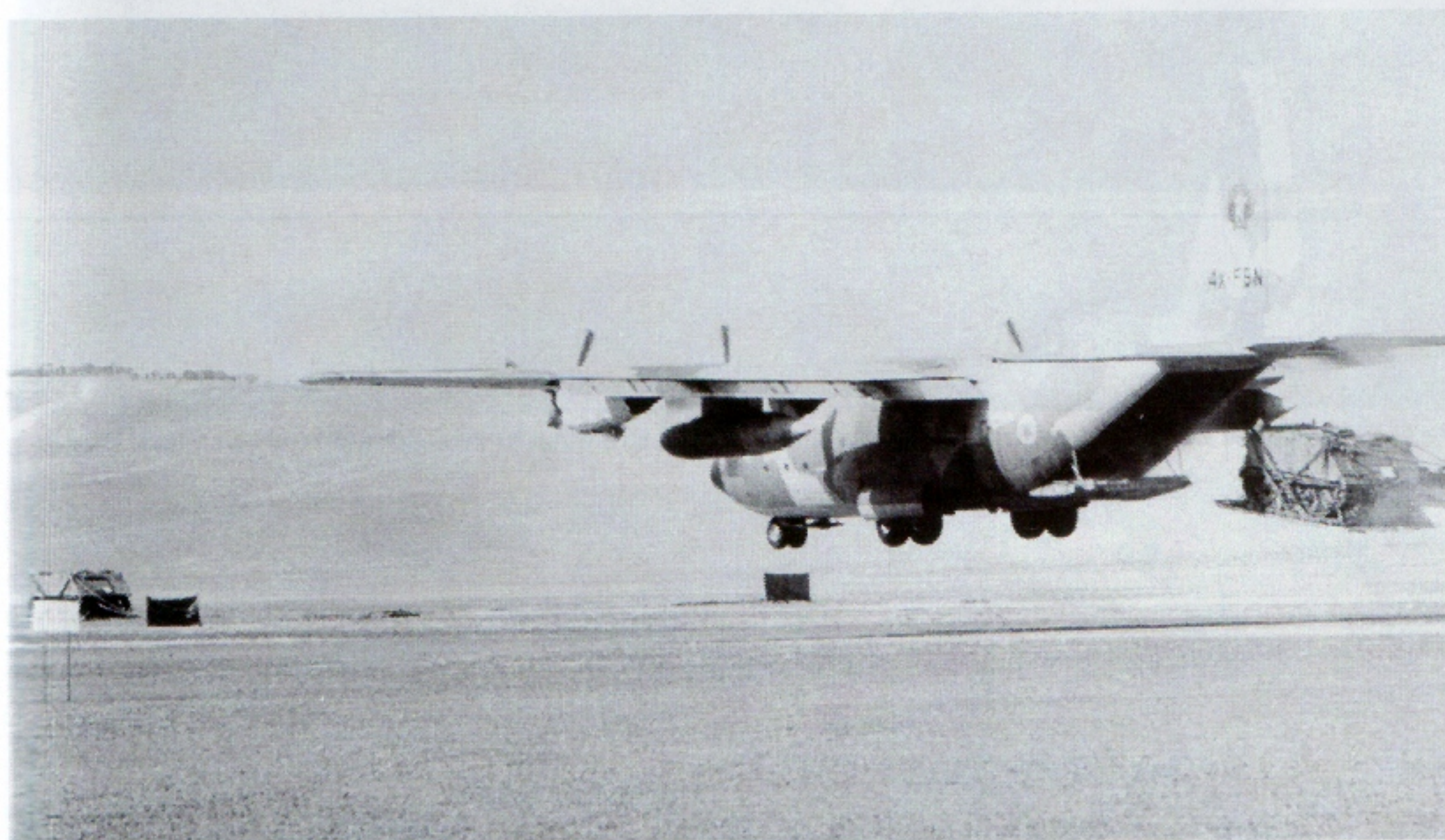
Paratroopers, conscripts in a rifle platoon, enter the rear access door of the C-130 prior to embarking on a routine jump. (IDF Spokesman)



During an aerial display and competition, a C-130 drops crates full of ammunition and supplies to an awaiting platoon of paratroopers on the ground. (IDF Spokesman)



The mighty workhorse of the IAF: the C-130 Hercules, seen here unloading supplies in a split-second touchdown on an impromptu field runway. The Hercules allows the IDF to promote its operational range far beyond the boundaries of the region. (IDF Spokesman)



An M113 APC makes a fast exit through the rear doors of a C-130; the Hercules' ability to drop-off supplies without needing a runway making it a most favored aircraft among besieged personnel who need to be urgently supplied. (IDF Spokesman)



Close-up view of the markings and camouflage scheme of the IAF C-130—photographed at Independence Day celebrations. (Courtesy: Yoav Efrati)





Dramatic photograph of a C-130 Hercules, the IAF's transport workhorse, utilizing its jet thrust ability for extra push at take-off. (IDF Spokesman)

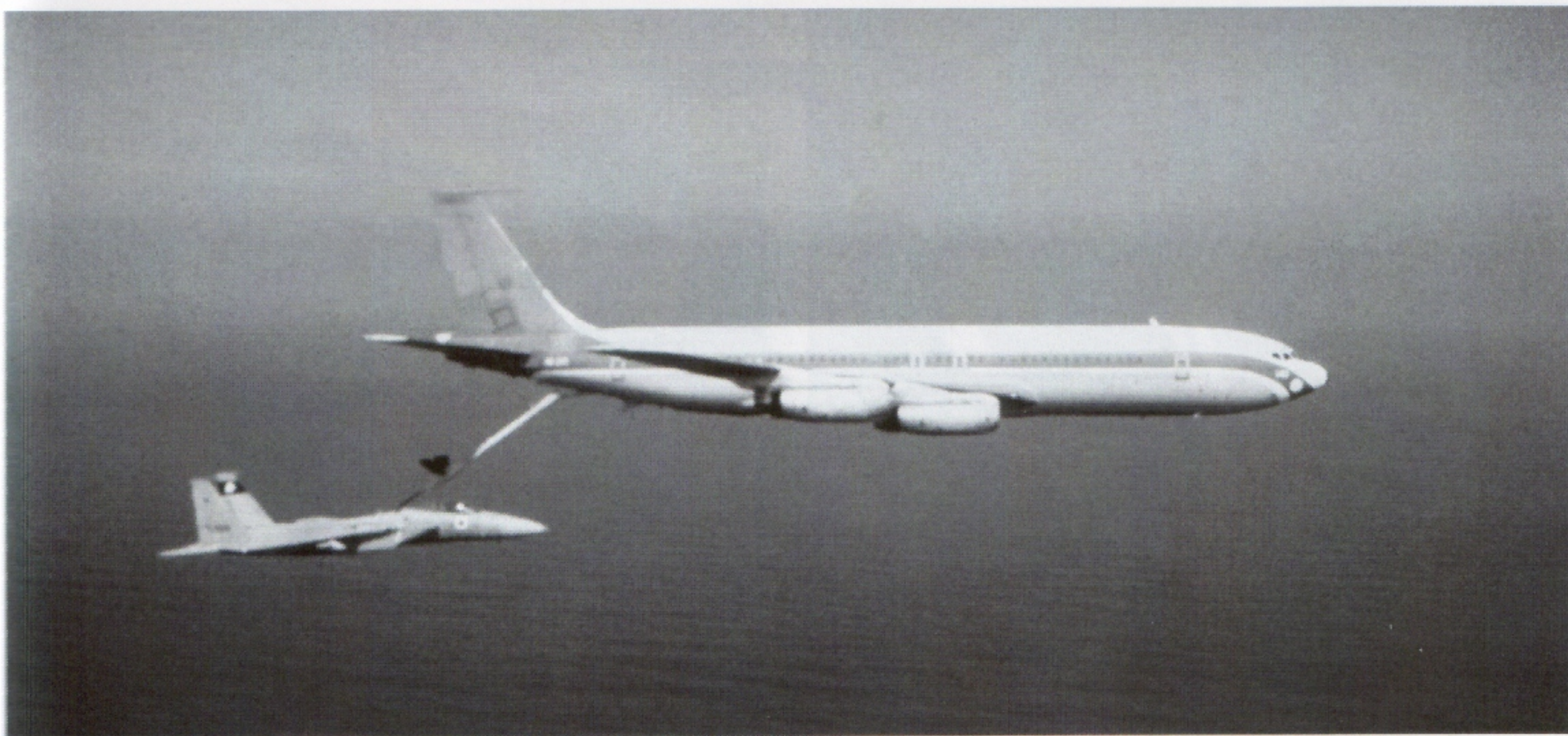


The true workhorse of the IAF; it is an aircraft which many have termed the unstoppable flying machine: the C-47 Dakota. From the Mitla Pass to Lebanon, the Dakota has proven a most resilient and capable aircraft—even into the 1990s. (Samuel M. Katz)



Excellent side-view of the camouflage scheme displayed on the IAF's still flying fleet of C-47s—a scheme that hasn't changed in nearly forty years. (Samuel M. Katz)





An IAI modified Boeing 707, the mid-air service station of the IAF, refuels a thirsty F-15 high above the shimmering waters of the Mediterranean. Although Israeli security restrictions limit the publication of IAF long-range operations, it is obvious that such tankers, like this 707, greatly increase the operational range of the IAF's aerial fleet of fighters. (*Biton Heyl Ha'Avir*)



Once concealed in a three-color camouflage design, and then decorated in a blue and yellow scheme, the *Tzukit* in today's IAF is adorned in an orange/red and white design. (Samuel M. Katz)



The IAF Flight School, a long row of pugnacious battle-proven *Tzukit* trainers awaits a class of students. The IAI's revamped version of the French Potez Air C.M.170 Fouga Magister. Once assigned the most difficult tasks of strafing enemy armor formations at extremely low and dangerous altitudes, the *Tzukit* now trains future aces the art of piloting jet aircraft. (Samuel M. Katz)



With its squadron emblem "faithfully" below the cockpit, a *Tzukit* sits protected from the harsh desert sun while its pilot labors away in class. (Samuel M. Katz)





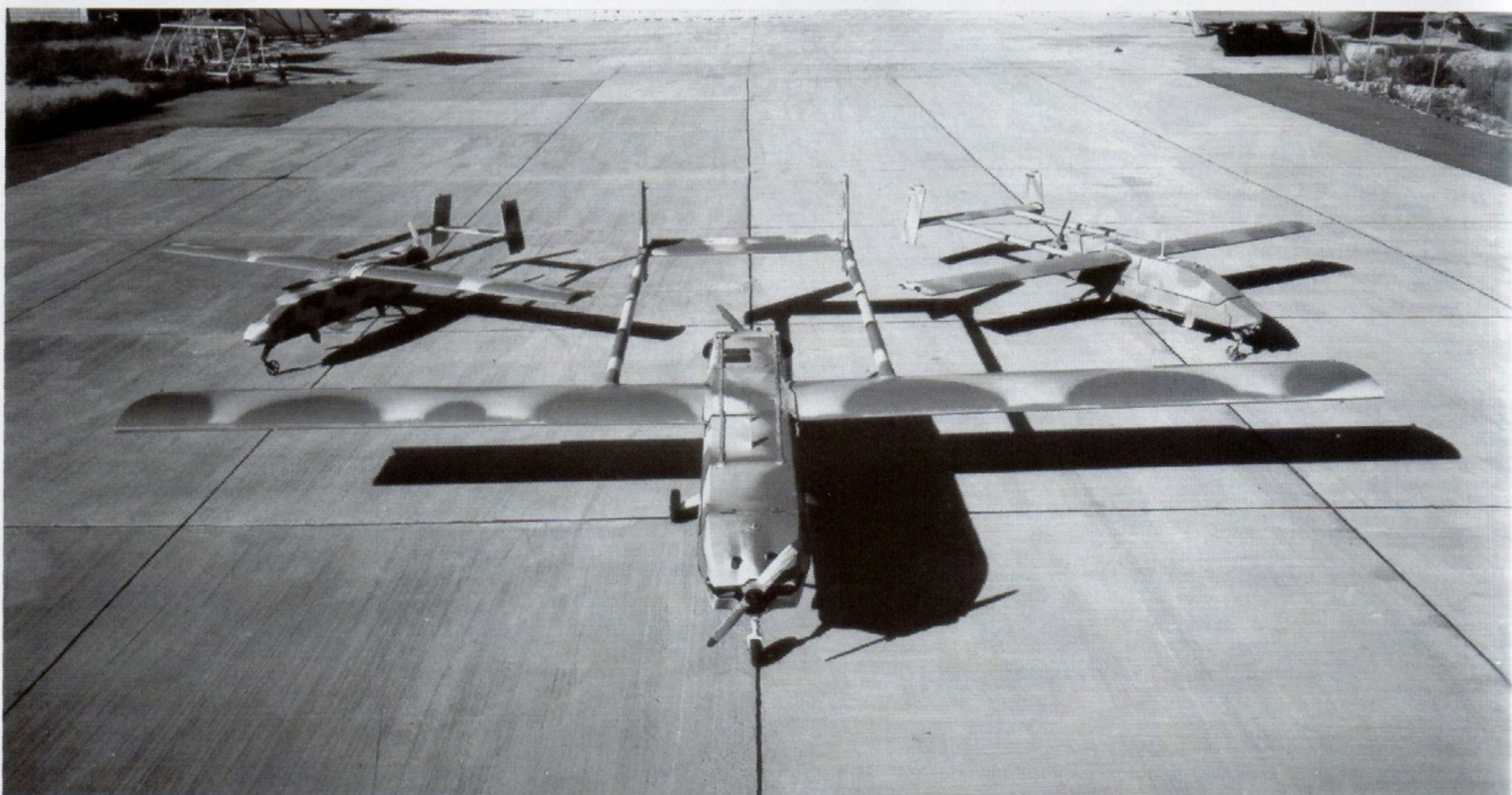
A flight of **Tzukit** jets, flown by the IAF's aerobatics team, stream in a jet-engine dance of precision during an air display in central Israel. (Herzl Kunesari/IDF Spokesman)



Parked in neat rows, a fleet of Piper Cubs (AP-18-150 Super Cubs) sit in the 40° C heat of the Negev Desert and await the next class of pilot-hopefuls and their nervous instructors. (Samuel M. Katz)



The "Cub": the first aircraft hopeful pilot candidates are introduced to. Like the **Tzukit**, it is adorned in an orange/red and white scheme. (Samuel M. Katz)



A display of Israel Aircraft Industries Scout RPVs, in their various color schemes and camouflage patterns. (Courtesy: Israel Aircraft Industries)



## Small, Fast and Lethal: Israel's Attack Helicopter Fleet



"Conveniently" parked atop a hill at an IDF forward base near the Lebanese frontier, a Bell AH-1 Cobra prepares to take-off for an operational assignment in "bandit country"; besides being able to destroy enemy armor with ferocity, the seven tube 2.75-inch rockets and detachable TOW missile launchers are potent anti-terrorist weapons, as well. (*Biton Heyl Ha'Avir*)



Responding to a call of armed men moving toward Israeli lines in southern Lebanon, a flight of Cobras is summoned for the intercept and back-up. (*Biton Heyl Ha'Avir*)





"Somewhere" in northern Israel, a column of **Merkava** MBTs receive an extra vote of confidence by the appearance of the sleek and deadly tank-killer the AH-1S Cobra attack copper. (*Biton Heyl Ha'Avir*)



Cobra has the ability of the Cobra to fight a battle and then simply park itself in a secluded spot, refuel, re-arm and head back into the fray. Here, two Cobras take five in the Negev before returning to large-scale maneuvers in southern Israel. (*Biton Heyl Ha'Avir*)





At a Spartan base in northern Israel, near the Lebanese frontier, ground crewmen arm an AH-1S Cobra for action against Palestinian terrorist targets. (*Biton Heyl Ha'Avir*)



Ground crewmen work on an AH-1S Cobra at a frontier base. With its wide array of weaponry, high speeds, agility and maneuverability, the Cobra has proven itself to be a most capable weapons system. (IDF Spokesman)

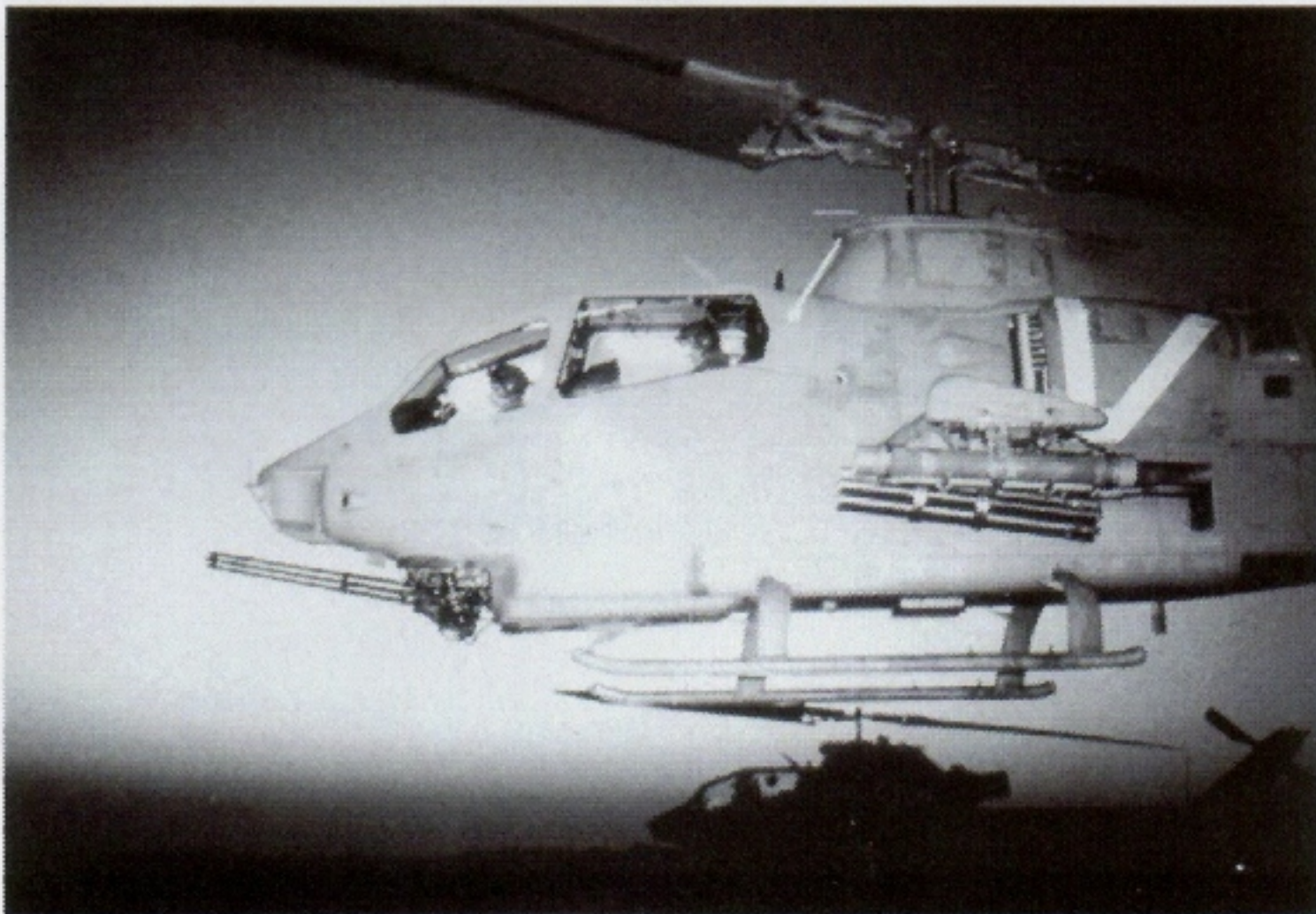


The armored cavalry and the aerial cavalry—a few reasons why the IDF is a tank-killing army second to none: the *Merkava* MBT and the AH-1S Cobra. (*Biton Heyl Ha'Avir*)





A Cobra, its 20-millimeter gun poised for action, races into a wadi in southern Lebanon, ready to support a squad of **Golan** infantrymen engaging a force of **Hizballah** gunmen. Note how Spartan terrain offers excellent hiding spots for well-entrenched terrorists. (IDF Spokesman)



During one of the most precarious times for a chopper pilot, twilight, a flight of Cobras heads toward the Lebanese frontier and support of IDF ground operations against Hizballah and the Palestinian allies. (IDF Spokesman)



A Cobra searches the dunes and Spartan vegetation of the southern Lebanese coastline for a band of Palestinian terrorists attempting to cross the heavily fortified frontier into Israel. On numerous occasions, the Cobra's rapid fire 20-millimeter gun has proven to be a decimating foe to lightly armed Palestinian terror squads. (IDF Spokesman)



As impromptu an airbase as can be produced, two Bell AH-1S Cobras lay in wait, in southern Lebanon, preparing for the next operation. (Jonathan Torgovnik/IDF Spokesman)



A Bell Cobra armed with the M197 20-millimeter cannon and TOW ATGWs provides formidable "cover" for a Bell-212 landing a squad of paratroopers near an enemy fortification during large-scale maneuvers in southern Israel. (Ro'ey Cohen/IDF Spokesman)



Seen here in northern Israel, a Hughes 500MD Defender pauses on a flat piece of volcanic rock. Its fast flying ability, tight maneuverability and four TOW missiles make it a mighty threat to enemy armor. (Jonathan Torgovnik/IDF Spokesman)



Making a low-level turn over a formation of **Ma'Ga'Ch** (The IDF acronym for the Patton family of tanks), a maneuvering Defender shows to advantage the markings on the 500MD. (IDF Spokesman)





A tanker's nightmare in any scenario. Hugging the earth over the horizon, virtually invisible to the naked eye and to the turret AA gunner, a sleek line of Defender choppers, in attack formation, prepare to make an attack pass during maneuvers in southern Israel. (*Biton Heyl Ha'Avir*)



When an IDF tank brigade commander wants to confer with his close-air support, he doesn't need the radio—he can call for a one on one meeting. Here, on the training fields of southern Israel, a Defender pilot is summoned to a field conference for a strategy session. (*Biton Heyl Ha'Avir*)



Hovering for only a brief moment in order to acquire its target, a Defender fires a TOW missile at a row of former Egyptian Army T-34s now serving as realistic targets. (Michael Giladi/IDF Spokesman)



As the sun sets in northern Israel, a Defender attack helicopter awaits its pilots for the night shift over the skies of Lebanon. (Ro'ey Cohen/IDF Spokesman)



A Defender undergoes routine maintenance at an airbase in northern Israel prior to embarking on an active patrol over the "Security Zone." Photograph shows to advantage the rear of the Defender chopper. (*Biton Heyl Ha'Avir*)

Being called to a developing situation during large-scale tank maneuvers in southern Israel, a Defender quickly takes-off for the short flight into battle. (Michael Giladi/IDF Spokesman)



The sleekest and among the most maneuverable of the IAF's fleet of attack choppers, the lightly armed Defender has incredible range and stamina while flying combat missions, and it is a favorite of IAF helicopter pilots. Here, over northern Israel, a Defender banks before making a patrol pass. (*Biton Heyl Ha'Avir*)





Ready to swoop down and let loose a burst of TOW ATGW missile fire, a Hughes 500MD Defender makes a low-level flyby over a column of *Merkava* MBTs during maneuvers in southern Israel. (Yuval Navon/ IDF Spokesman)



Having just landed to confirm an attack plan against "enemy" armor during maneuvers, a Defender pilot, his identity hidden for security reasons, prepares its immediate take-off. The IDF's ability to maintain an airborne antitank element proved to be a most potent combination during the Lebanon War. (IDF Spokesman)



A sight which to a Syrian tank soldier might be the most terrible nightmare imaginable, by "welcomed relief" to an Israeli crewman: a fully-armed Defender hovers above an IDF M113 APC fitted with spaced armor protection. (Michael Giladi/IDF Spokesman)





Using the treeline as cover against Syrian anti-aircraft batteries— and infantrymen firing shoulder launched SAM-7 "Grails"— a Defender (in true attack chopper tactics) makes a final approach before attacking a column of Syrian armor in the Beka'a Valley, June 1982. The Defender, and its TOW ATGW, proved a more than capable foe to Syrian armor during Operation Peace for Galilee. (IDF Spokesman)



"The Blue and White Apache." September 1990— the AH-64 arrives in Israel. The mightiest attack helicopter in one of the world's mightiest air forces. (Tal Hirsch/IDF Spokesman)



The newest addition to the IAF's impressive and mighty fleet of attack helicopters, the McDonnell Douglas AH-64 Apache, performs an aerial display for invited guests, mainly senior IDF officers, at an airbase in southern Israel. (*Biton Heyl Ha'Avir*)





An IAF "Apache," one of the most eagerly awaited weapon systems to reach the IAF, performs a "mock" assault at an anonymous airbase in southern Israel. (*Biton Heyl Ha'Avir*)

An IAF technician, already expert in the inner workings of the Apache, makes sure that "his" bird is ready for a flight over the Mediterranean during the first weeks of the Apache in IAF service. (*Biton Heyl Ha'Avir*)



Interesting photograph of an Aérospatiale SA 342L Gazelle attack chopper, in both Syrian and IAF colors; it was captured in the battle for Lebanon's Beka'a Valley, in July 1982. The Gazelle, in Syrian hands, proved to be a deadly nemesis against Israeli armor and mechanized forces. (IDF Spokesman)



## The Transport Choppers

The Bell-206, a chopper known in the IAF vernacular as the **Ef'ah** (Desert Viper) prepares to take-off for a reconnaissance mission. (**Biton Heyl Ha'Avir**)



Future helicopter pilots assemble beside their instructor prior to some in-flight instruction on the Bell-206, a helicopter used for instruction, light transport and reconnaissance. As the pilot cadets are in the advanced stages of training, their faces are blacked-out for security considerations. (**Biton Heyl Ha'Avir**)

The IAF's Bell-206 Jet Ranger. The light transport and reconnaissance chopper was first received in the IAF's helicopter fleet in 1972, and has become the primary training chopper for the IAF's future whirlybird pilots. (IDF Spokesman)







Reconnaissance paratroopers return to their awaiting Bell-212 helicopter during the May 4, 1988 Israel raid against Hizballah forces in the southern Lebanese village of Maidun. The Bell-212 has become one of the IAF's most important transport choppers. (IDF Spokesman)



Two Bell-212 pilots examine their whirlybird in an impromptu maintenance stop atop a mountain in the Negev Desert. The mud scheme, which replaced the three color sand, green and brown camouflage scheme, is now applied to all the IAF's helicopters. (*Biton Heyl Ha'Avir*)

After checking in with headquarters, a Bell-212 prepares to lift off again and resume its patrol over northern Israel and southern Lebanon. Note boards placed above landing skids for the use of infantrymen either to leap off of, for or stand on when firing and fast-roping. (*Biton Heyl Ha'Avir*)







In a cloudy haze of colored smoke, a Bell-212 chopper executes a **Haspaka Be'Hetes** [or "Aerial Supply"] mission to IDF combat units in the field, in northern Israel. The yellow "V" is for the soldier's visual IFF purposes. (IDF Spokesman)



Bell-212s from the IAF's first helicopter squadron make a pit stop "somewhere" in the West Bank, during the Intifadah, while under guard from heavily armed reservists. (**Biton Heyl Ha'Avir**)



A Bell-212 pilot looks at his bird during a brief pit stop during a flight in southern Israel. (IDF Spokesman)





Banking left and right to avoid the wrath of guerrilla fired ordnance, a Bell-212 carrying crated supplies of ammunition, makes an approach prior to resupplying troopers in a forward position inside the security zone in southern Lebanon. (IDF Spokesman)

Perhaps the most important contribution of the Bell-212 to overall IAF capabilities is in a medevac role. Following a clash with Palestinian terrorists, a wounded soldier from the **Giva'ati** Infantry Brigade is brought to an awaiting Bell-212 near the field of battle. (IDF Spokesman)



Interesting photograph of a sprawling parking lot filled to capacity with Bell-212, at an anonymous airbase in central Israel. Although the exact number of Bell-212s in IAF service is classified, it is clearly the IDF's most "prolific" chopper. (Yuval Navon/ IDF Spokesman)



Rescuers from the IAF's elite Aeromedical Evacuation Unit demonstrate their stealth-like ability to deploy in hostile territory for a rescue; rappelling in and out of a field of fire. For this display, the commandos wear their khaki Class A uniforms. (IDF Spokesman)



Pilot candidates prepare for a most difficult training mission: learning how to be rescued in mid-sea after being shot down—of course, something each on vows will never happen to him. (*Bamachane*)

A CH-53 *Yasur* crew poses for the camera while another of the mighty transport chopper lifts off in the background. (*Biton Heyl Ha'Avir*)







Paratroopers take a well-deserved rest during maneuvers in southern Israel, while awaiting the orders to move out as their "aerial bus" (as the CH-53 is called by some in the IAF) waits nearby. (*Biton Heyl Ha'Avir*)



A CH-53 unloads a force of paratroopers for a surprise assault during maneuvers in central Israel. (IDF Spokesman)





Flying in tight formation into a deep ravine carved from the mountains of the Negev Desert, two CH-53 *Yasurs* deploy for action. Although a large helicopter, the *Yasur*, especially in Israeli hands, is an extremely agile aircraft. (*Biton Heyl Ha'Avir*)



A Command Car prepares to enter the belly of a CH-53 illustrating the strength and importance of the *Yasur* to IAF operation. (*Biton Heyl Ha'Avir*)



Blending into the desert hills carved by the sands of time, a *Yasur* makes a hill-hugging turn to avoid enemy radar while attempting to insert a force of paratroopers into an LZ during large-scale maneuvers in southern Israel. (*Biton Heyl Ha'Avir*)





During maneuvers around the Mt. Hermon area, the crucible and majestic peak connecting Syria, Lebanon, and Israel, a CH-53 **Yasur** awaits a force of recon paratroopers mounting an aggressive patrol. (*Biton Heyl Ha'Avir*)



A **Yasur** dives into a Negev Desert gorge, displaying pilot skill and the modified CH-53's improved maneuverability. (*Biton Heyl Ha'Avir*)



Close-up view of a laden down **Yasur-2000**, moments before lift off. Note markings in Hebrew. (*Biton Heyl Ha'Avir*)





With the foliage Spartan in his helmet making him look more like an American soldier in Vietnam than an IDF paratrooper in the Galilee hills, a **Tzanhan** appears poised for action after deploying from a CH-53 **Yasur** during a security assignment in northern Israel. (Ro'ey Cohen/IDF Spokesman)

Besides being the IAF's mightiest and most revered heavy-duty helicopter, the **Yasur** is also one of its most versatile. Amid the flowers of springtime Galilee, a Command Car is loaded into an awaiting **Yasur**. Note squadron markings. (**Biton Heyl Ha'Avir**)



The weight of its load making a quick ascent to reasonable altitudes a slow process, a CH-53 slowly makes it past the scenic though foreboding snow-capped Mt. Hermon while transporting material to forward line positions. (Yuval Navon/IDF Spokesman)





Heavily armed infantrymen from the **Giva'ati** Infantry Brigade charge an "enemy" held position —defended by their red beret paratroop comrades— deploy from a CH-53 **Yasur** during battalion-size maneuvers in southern Israel. (Michael Vinraub/IDF Spokesman)



An IDF soldier, wounded by a **Hizballah** booby-trapped device, is medevaced back to Israel courtesy of a **Yasur** chopper. (IDF Spokesman)



After landing a force of jeep-borne reconnaissance paratroopers to their forward staging point, a CH-53 **Yasur** awaits its next orders and lift-off. (Ro'ey Cohen/IDF Spokesman)



A CH-53 makes a sharp turn before heading into an impromptu LZ, inside the security zone in southern Lebanon; the evasive maneuvers are meant to keep it out of the sights of enemy anti-aircraft weaponry. (IDF Spokesman)



Dramatic photograph of the IAF's elite Aeromedical Evacuation Unit [or "AEU"] at work, removing a casualty from an IDF/Navy **Dabur** coastal patrol boat. The airborne means deployed is, of course, the CH-53 **Yasur**. One of the most powerful helicopters in the world, and, in IAF hands, one of the most versatile. (Yuval Navon/ IDF Spokesman)

Military policemen escort a Palestinian terrorist from the fundamentalist group Hamas to deportation in southern Lebanon. As can be seen by this photograph, the **Yasur** is the IAF's key multi-purpose transport chopper. (Yuval Navon/IDF Spokesman)



An AEU CH-53 door gunner, his eyes piercing the Lebanese countryside for the proper invitation to use his 7.62 millimeter, door mounted, FN MAG light machine gun. In order for the helicopter-borne rescuers to do their job, they must be guaranteed no interruptions from any unfriendlies. (Michael Giladi/IDF Spokesman)



A CH-53 *Yasur* prepares to deploy an AEU contingent during low-light exercise in northern Israel. (Sigalit Katz)



Still going strong after all these years! During brigade size maneuvers in southern Israel, a Sud Aviation SA 321K Super Frelon prepares to heli-lift paratroopers playing wounded to a battalion aid station. (Dina Koren/IDF Spokesman)



An Aérospatiale SA 365 Dauphin 2 maritime, and search-and-rescue helicopter, is readied for flight on board an IDF/Navy Sa'ar class missile boat. (Ofer Karni/IDF Spokesman)





An IAF Aérospatiale SA 365 Dauphin 2 in joint-service with the IDF/Navy [or "**Heyl Ha'Yam**"] races past a missile boat armed with a Phalanx anti-aircraft Close In Weapons System. (**Biton Heyl Ha'Avir**)



An Aérospatiale SA 365 Dauphin 2, piloted by a **Sgan Aluf** (or lieutenant-colonel), flies in formation above the Galilee region of northern Israel. (**Biton Heyl Ha'Avir**)



With the twilight's last glimpses of sunlight providing ample light for landing, a Dauphin's boat crewman brings the sleek red and white ship in for the night. (**Biton Heyl Ha'Avir**)





A joint-IAF-IDF/Navy Aérospatiale Dauphin hugs the tranquil waters of the Mediterranean after deploying from an IDF/Navy missile boat; the "Dolphins" entered Israeli maritime service in July 1985. (IDF Spokesman)

A Dauphin boat/ground crew, race for cover on board their Sa'a class missile boat moments before their bird's take-off and a patrol of the precarious Mediterranean. (Sivan Faraj/IDF Spokesman)



"The 'Dolphin' is coming down!" On the miniaturized, though "it'll have to do" landing deck of an IDF/Navy **Aliyah** class Sa'ar missile boat, an Aérospatiale SA 365 Dauphin 2 maritime patrol chopper is guided to a safe landing by a ground/sea crewman. (Sivan Faraj/IDF Spokesman)



## The Armed Bats—The IAF Air Defense Units



A Chaparral battery, well hidden in northern Israel. The M48A1 Chaparral is the IAF's mainstay low-altitude surface-to-air missile system which although first seen on the battlefield (in American service) in the 1960s, is still a lethal answer to low-flying threats. (IAF)

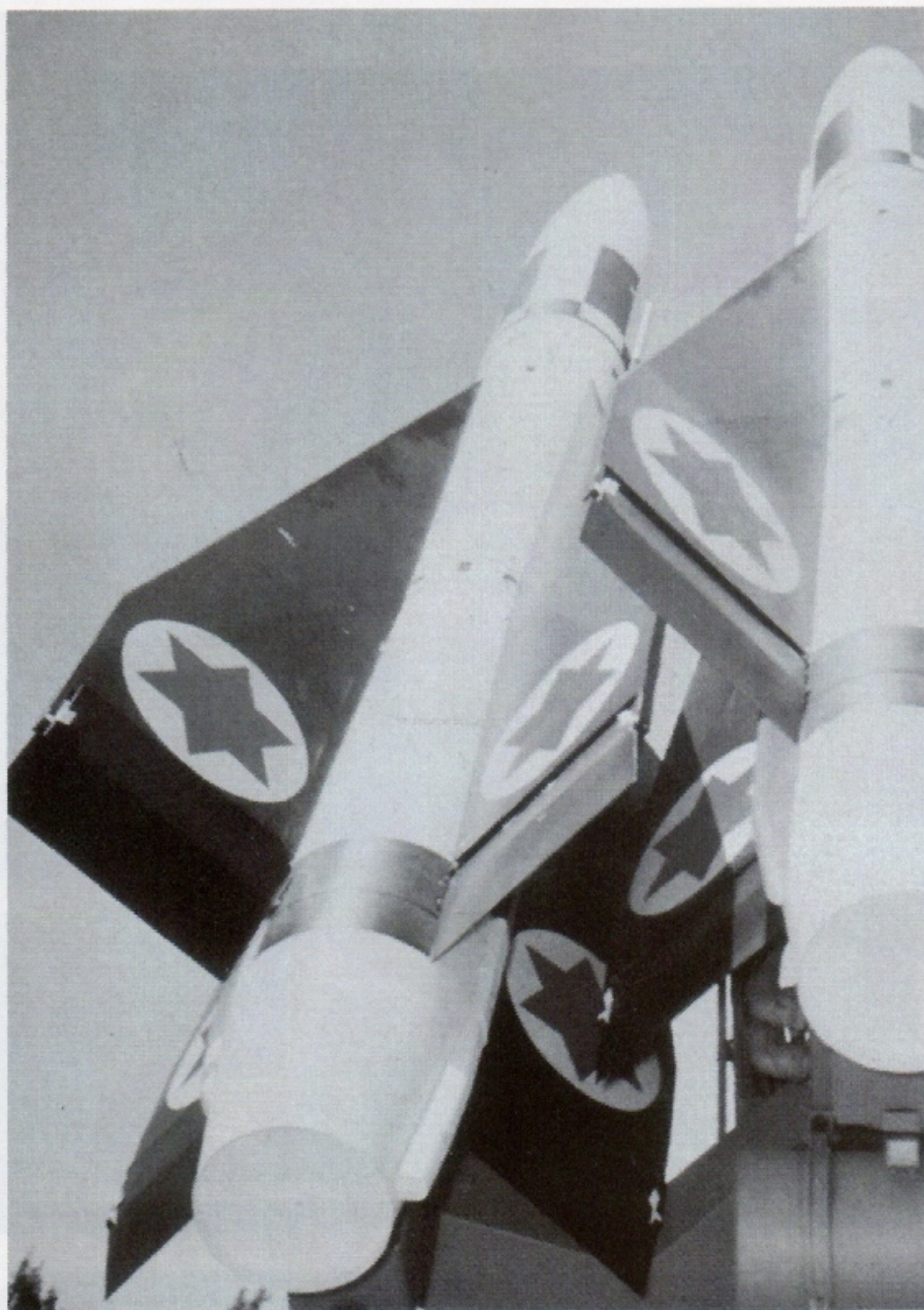


En route—it had better be—towards the target drone flown over the Mediterranean, a Chaparral makes an attempt to prove that its bite is worse than its explosive bark. (IDF Spokesman)

A Hawk SAM battery, in its newer one-color mud-scheme, stands at the ready at a forward defensive point "somewhere" in central Israel. Although its designers never envisioned the Hawk shooting down high-altitude speedsters like the MiG-25, the IAF has tinkered with the Hawk just enough to increase its range and intercept envelope. (*Biton Heyl Ha'Avir*)



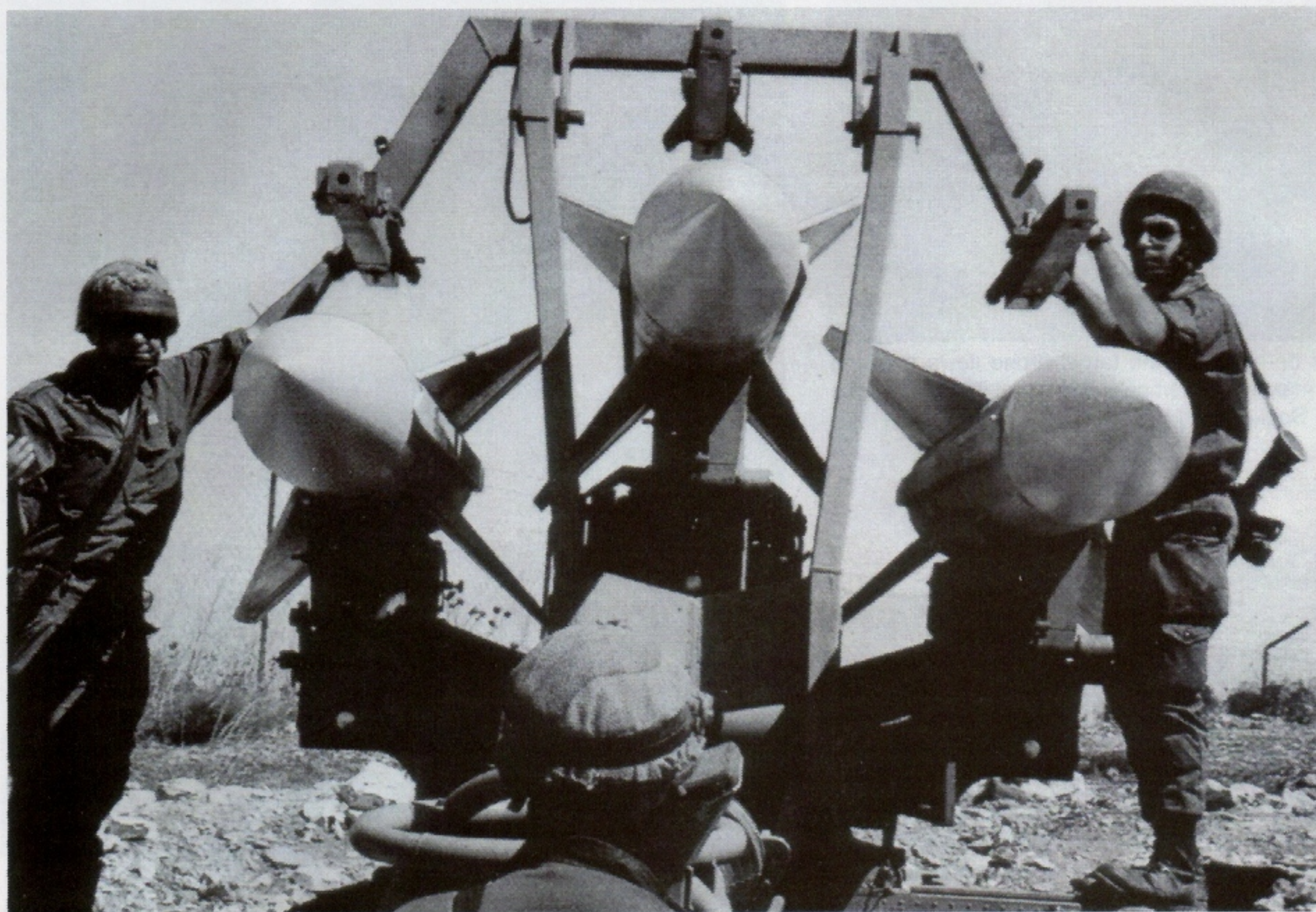




The Hawk as seen in its old black and white scheme—still found on some batteries. (*Biton Heyl Ha'Avir*)



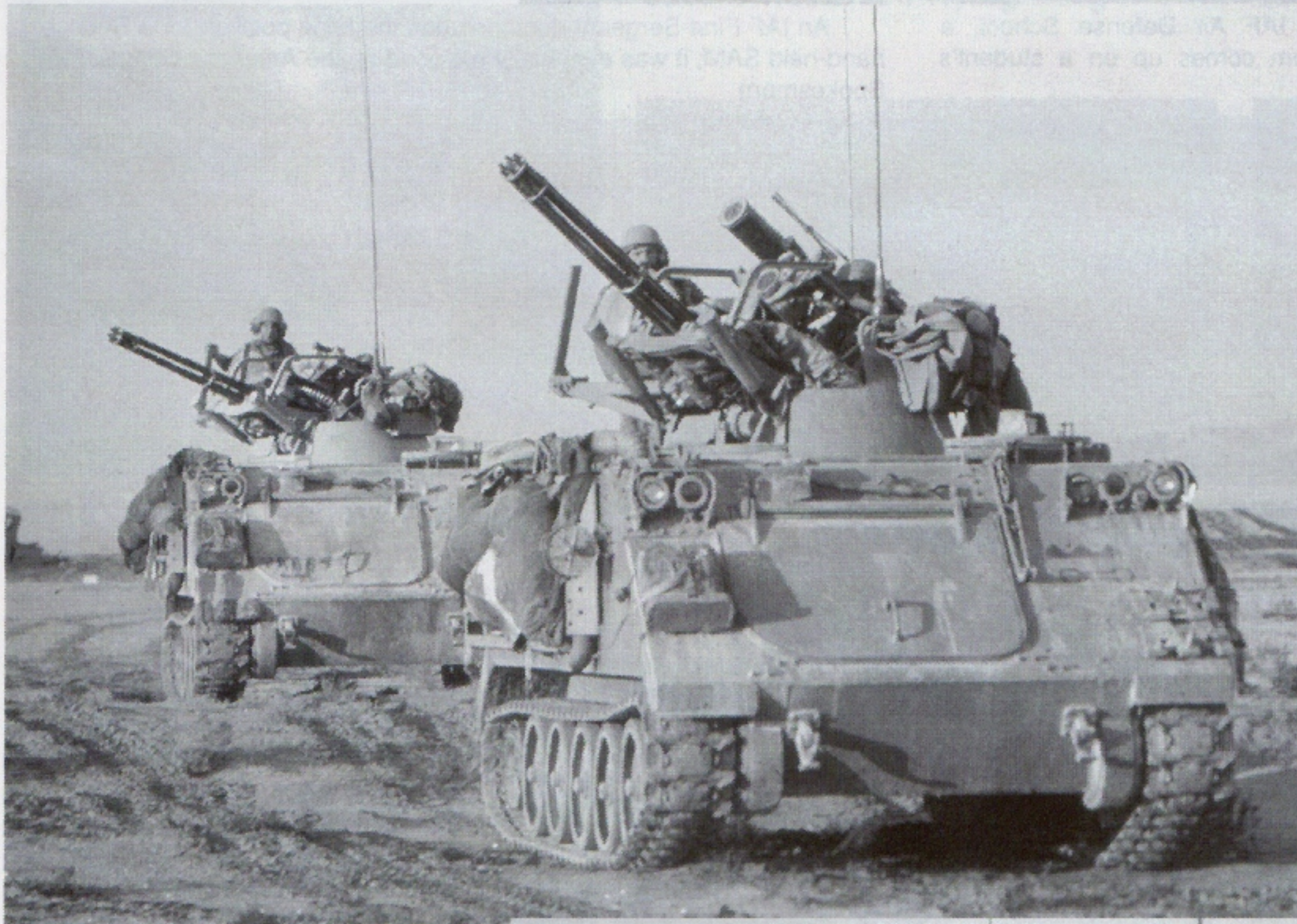
A battery of Hawk surface-to-air missiles sit poised for action—securing an airbase in southern Israel from enemy aircraft. (IDF Spokesman)



The heavily armed crew of a Hawk SAM battery, stationed in the north, in between Lebanon and Syria, transfer their triumvirate of surface-to-air destruction onto their launchers. (*Bamachane*)



January 19, 1991: A U.S. Air Force C-5A Galaxy lands in Israel carrying the eagerly awaited Patriot SAM to meet the barrage of SCUDs launched against the Jewish State during the Gulf War. The Patriot's performance in Israel, although applauded in the media, has since turned out to be less than successful; some critics of the Patriot claim that the missile failed to destroy a single SCUD warhead in mid-air. (Ofer Lefler/IDF Spokesman)

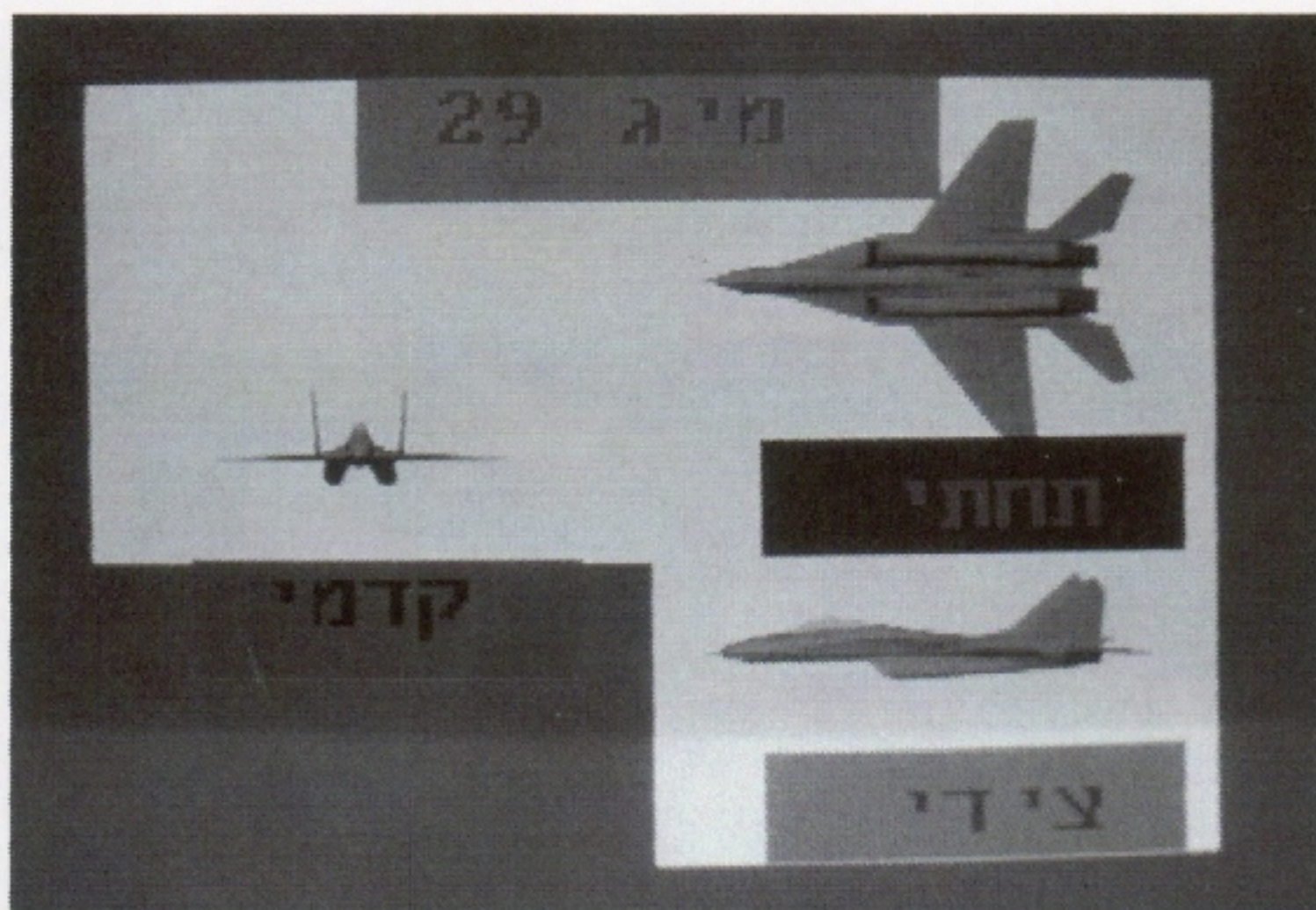


The IAF's version of "Chained Heat"—the M163 Vulcan 20mm anti-aircraft system. Effective against low-flying aircraft and helicopters, the Vulcan is also lethal against fixed targets, such as pillboxes and sniper dens. (Michael Zarfati/*Bamachane*)

While the air defense responsibility is delegated to artillery units in most armies, the IAF **Nun-Mem** [Hebrew abbreviation for "anti-aircraft"] forces is in sole command of Israel's skies. A battery of M163 Vulcan 20-millimeter mechanized AA guns guards an armored convoy in Lebanon from harassing enemy jets or choppers during the 1982 "Operation Peace for Galilee." (IDF Spokesman)







During computerized classes at the IAF Air Defense School, a computerized image of the MiG-29 Fulcrum comes up on a student's screen. (*Biton Heyl Ha'Avir*)



An IAF First-Sergeant demonstrates the firing position for a Redeye hand-held SAM; it was eventually replaced by the American Stinger. (IDF Spokesman)



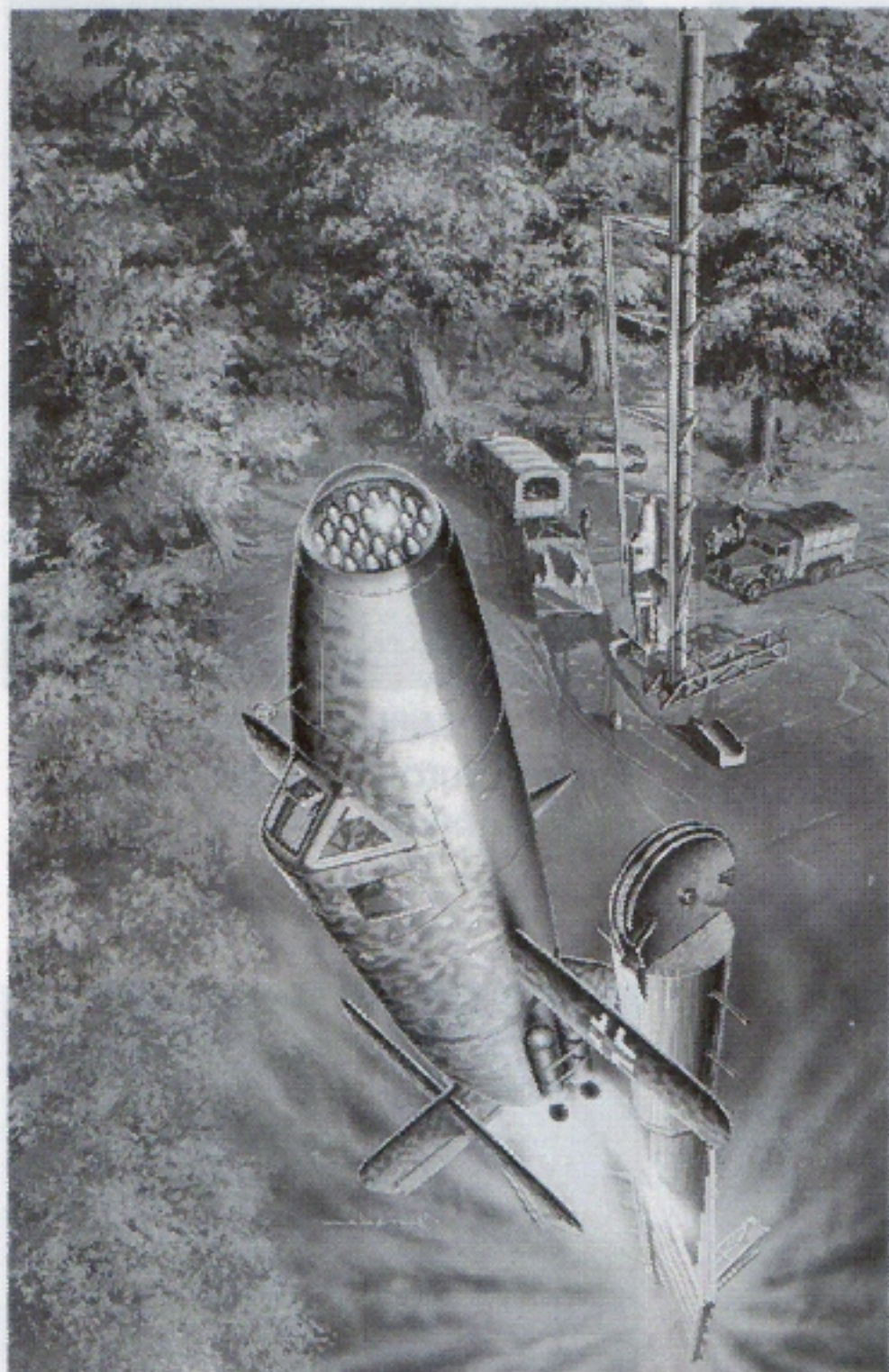
Although the 40-millimeter AA batteries are less dramatic than the air-superiority fighters, Hawk, Chaparral and Vulcan batteries which help defend the Israeli skies, they are equally as important. The battery's crew, pictured here, also displays that they are accurate contributors to Israel's air defenses, as well. (IDF Spokesman)



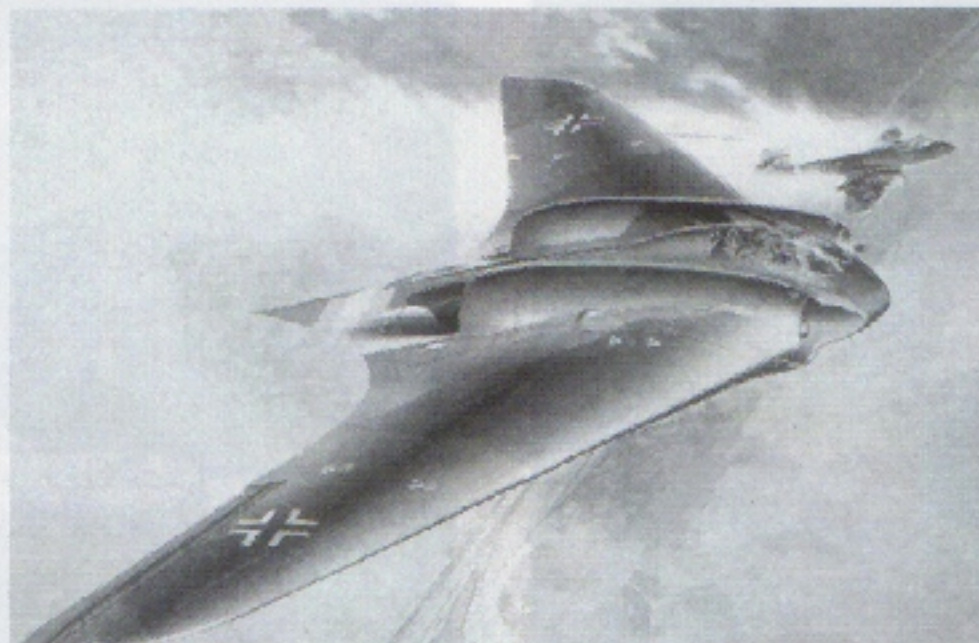
Proving that it can play with the Hawk, Chaparral and Vulcan "big boys" too, a 40-millimeter battery pounds the decibels and a target drone in southern Israel. (Sivan Faraj/IDF Spokesman)



## 1:48 Series



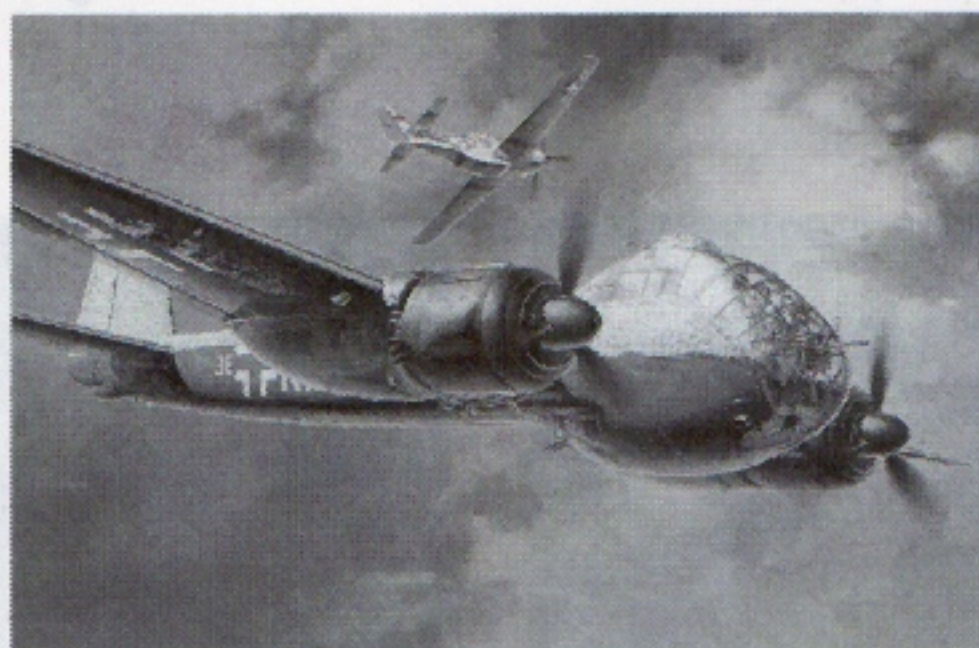
5516 Ba349A Natter w/Launch Tower



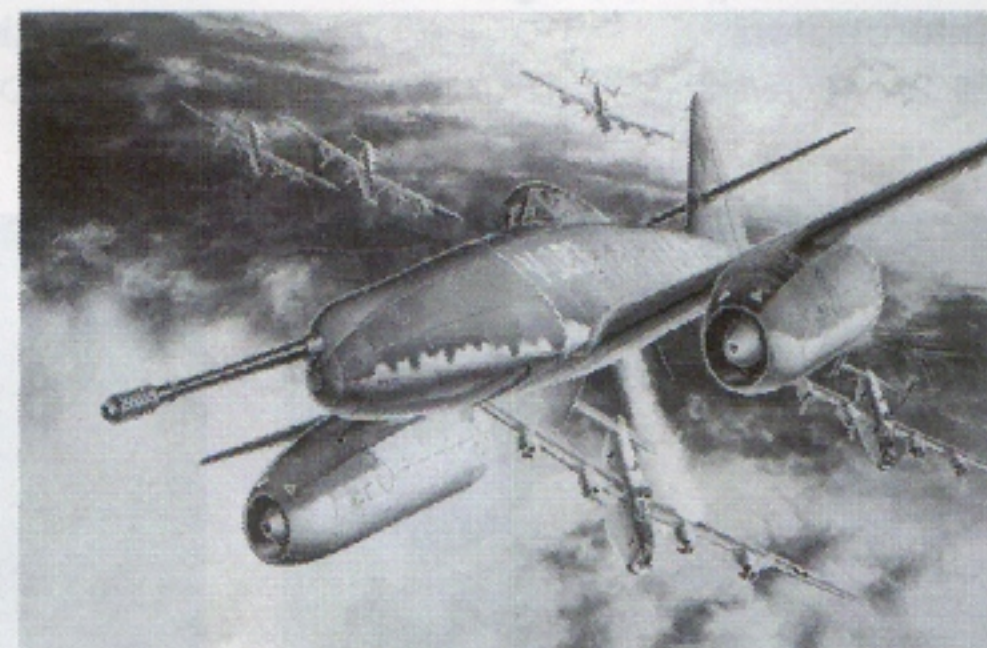
5505 Ho229A-1 Flying Wing



5510 Mistel 2/2S  
(Fw190F-8 w/Ju88G-1)



5518 Ju188E-1 Avenger

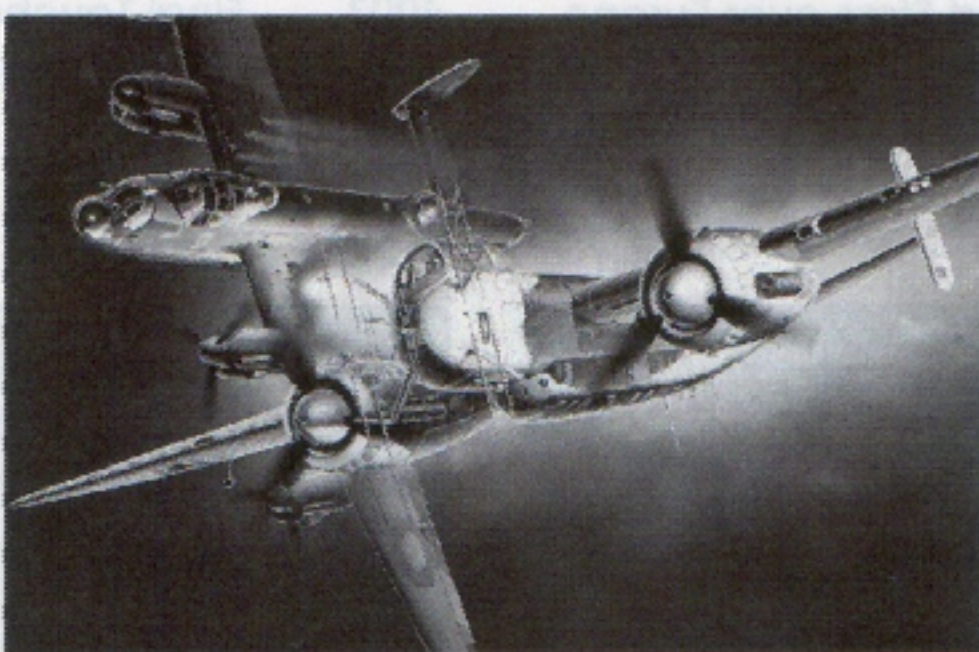


5523 Me262A-1a/U-4 Bomber Interceptor

## 1:72 Series



5002 Mistel 5 (He162A-2 w/Arado E-377a)



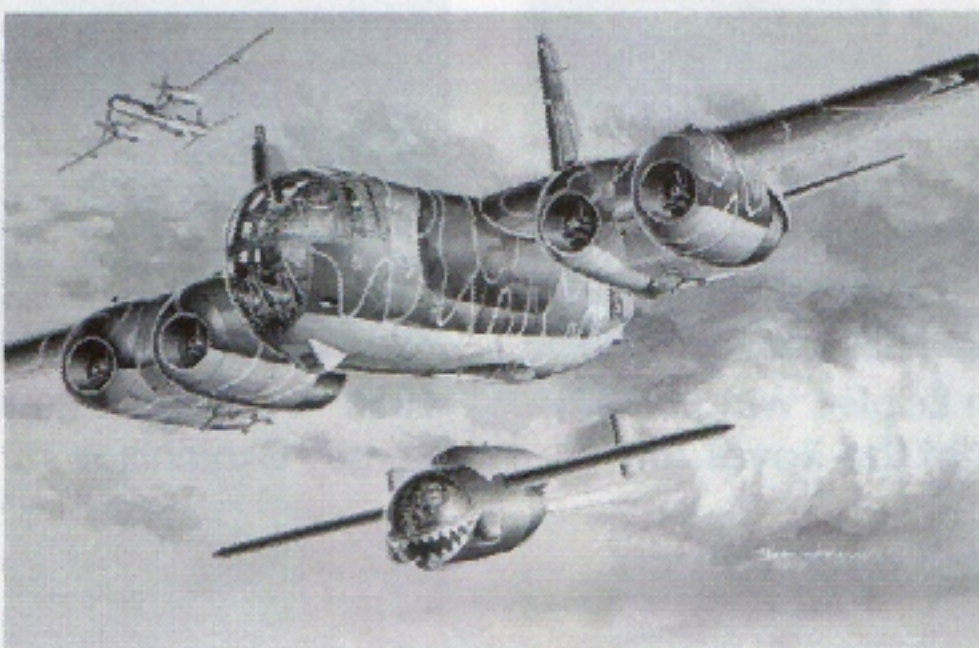
5005 Heinkel He219A-0 UHU



5010 Do335B-6 Arrow



5011 Ar234C-4 w/V-1 Huckepack



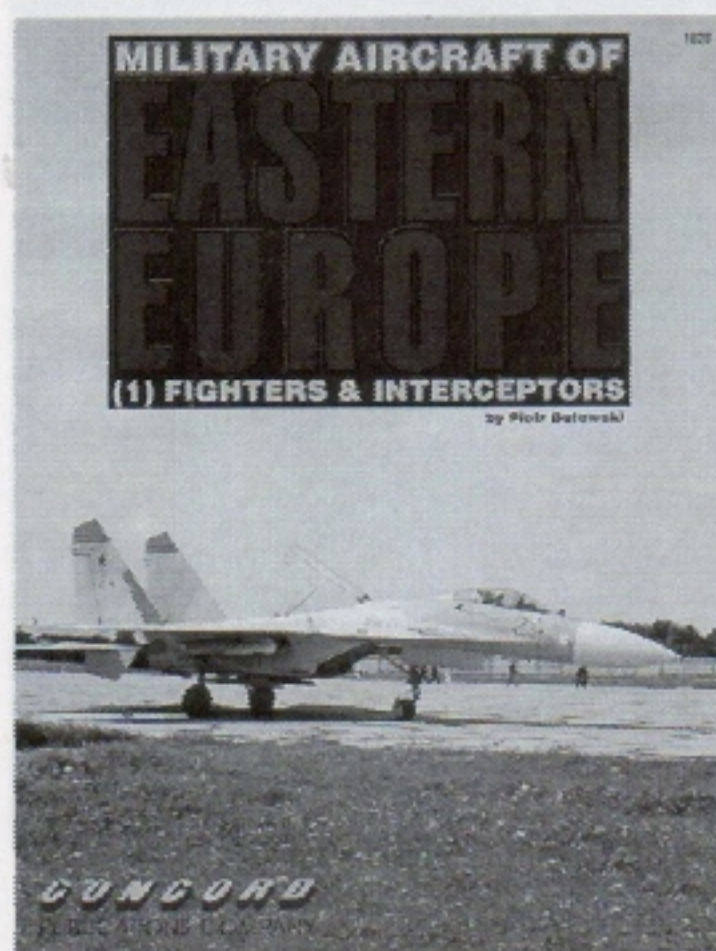
9005 Ar234C w/Ar E381 Julia



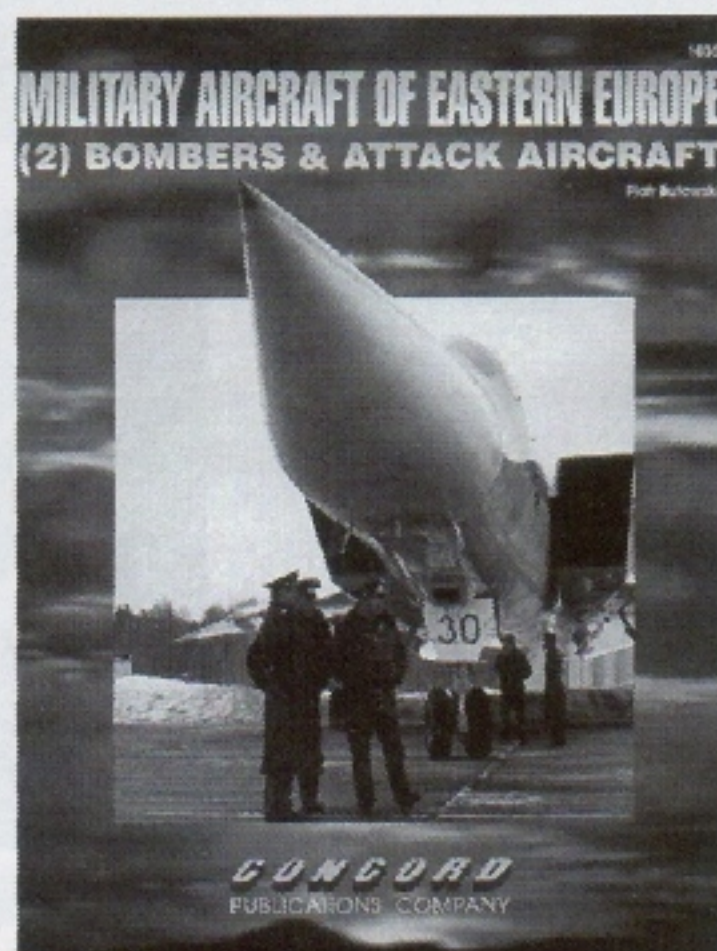
**DML**

**PLASTIC MODEL KITS**

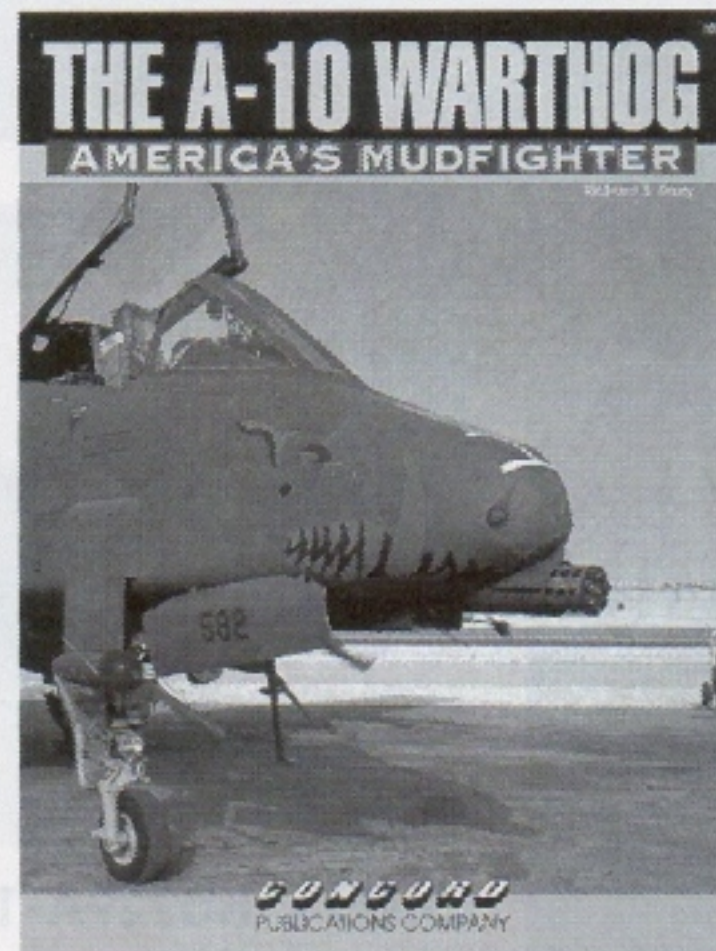




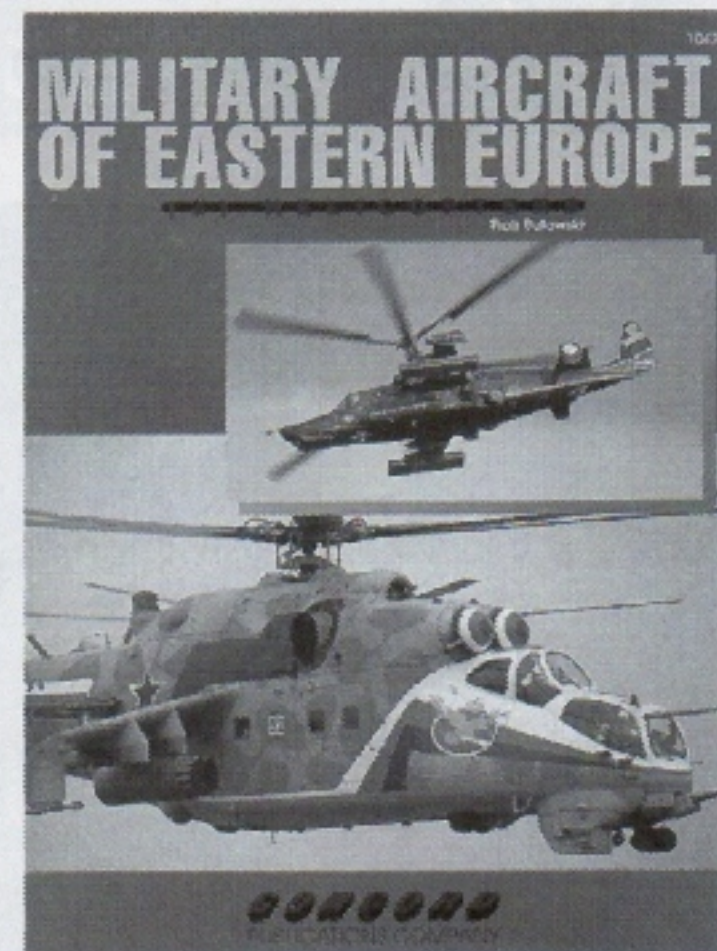
1028 Military Aircraft of Eastern Europe: (1) Fighters & Interceptors  
Piotr Butowski



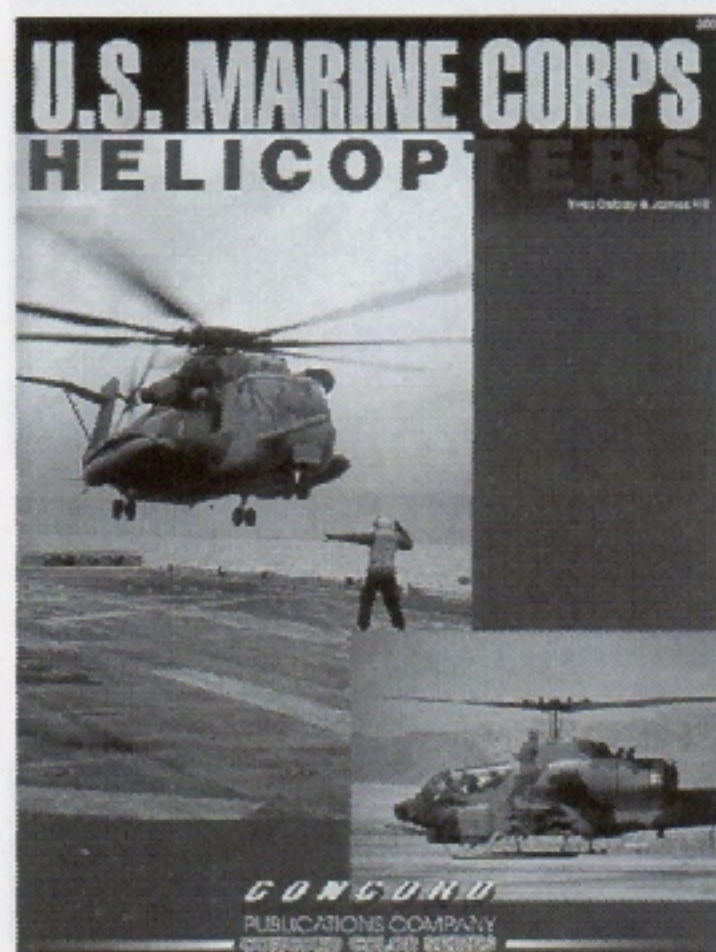
1035 Military Aircraft of Eastern Europe: (2) Bombers & Attack Aircraft  
Piotr Butowski



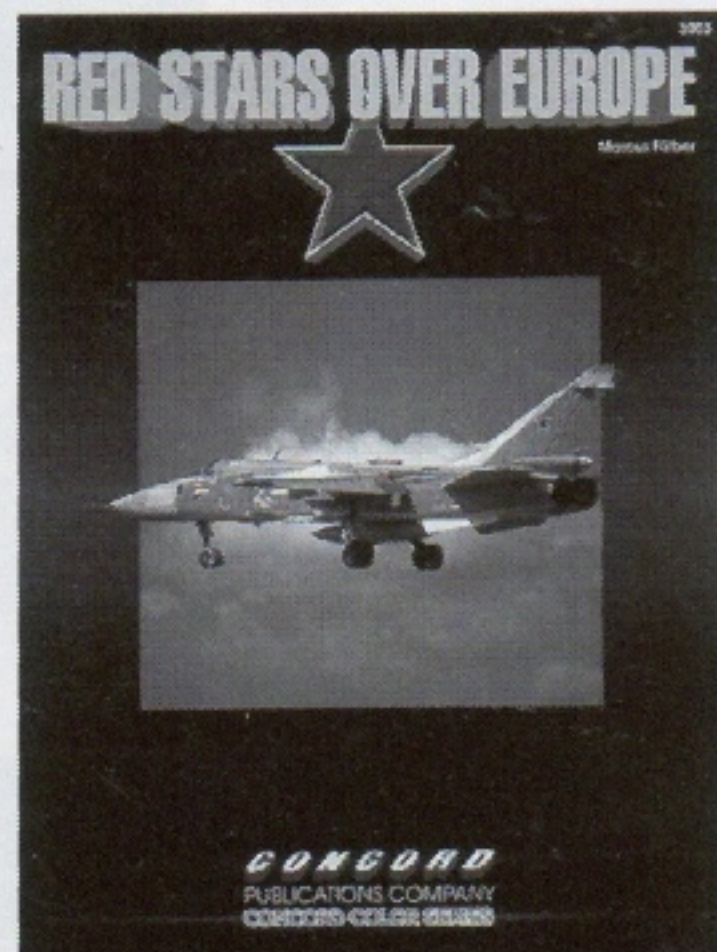
1037 A-10 Warthog: America's Mudfighter  
Richard S. Drury



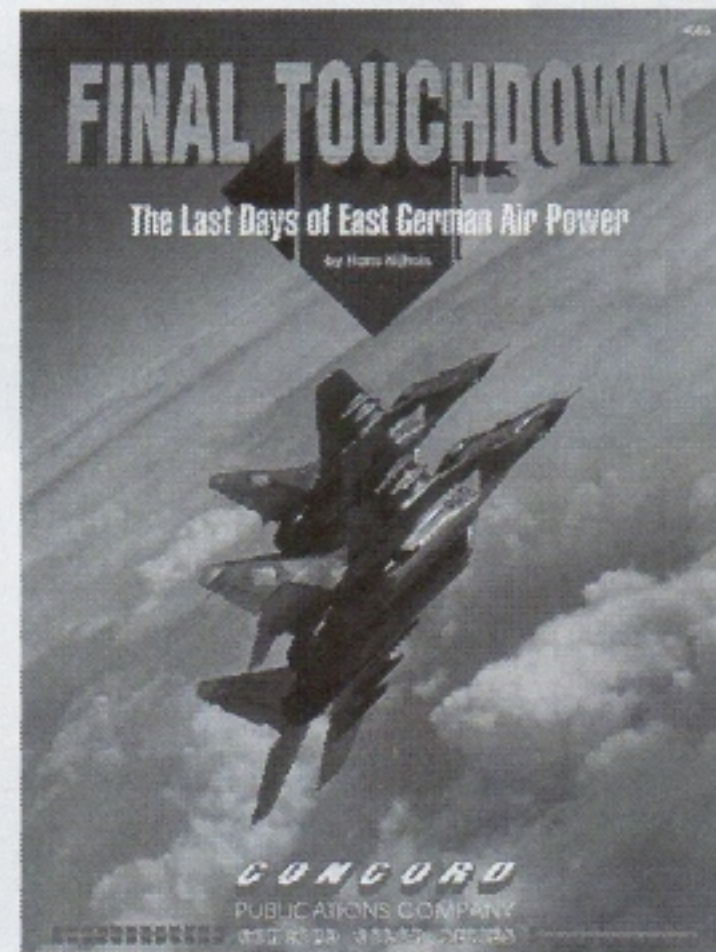
1042 Military Aircraft of Eastern Europe: (3) Helicopters  
Piotr Butowski



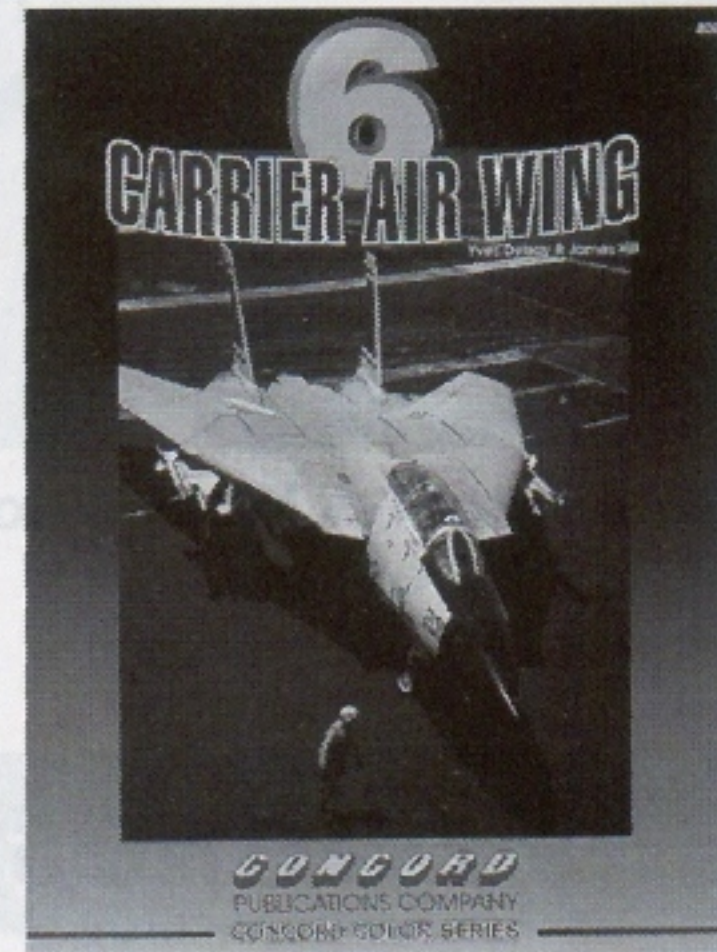
3002 U.S. Marine Corps Helicopters  
Yves Debay & James Hill



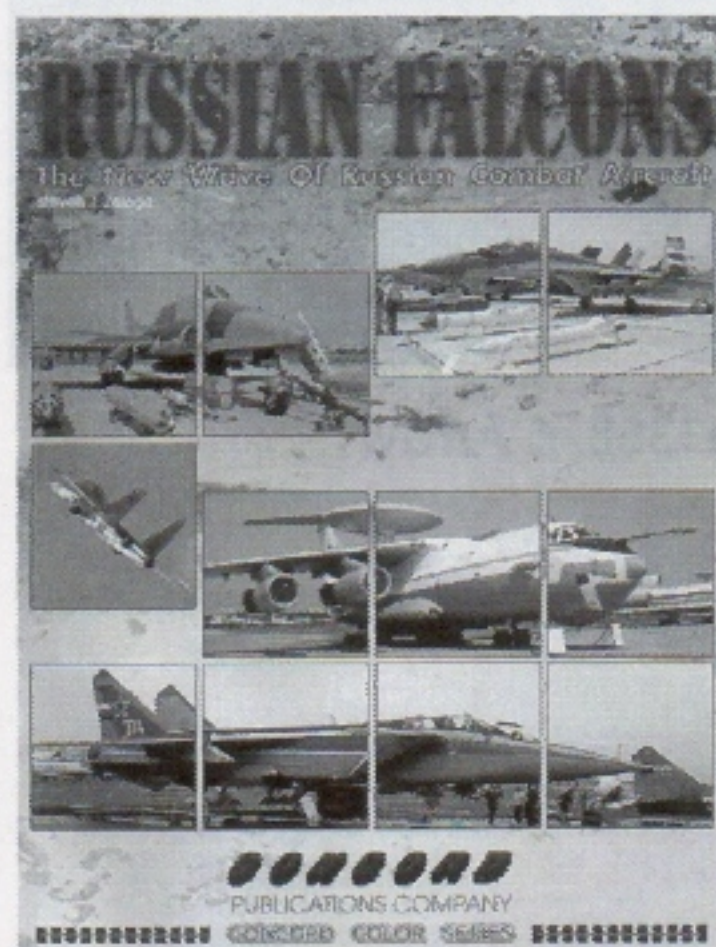
3003 Red Stars over Europe  
Marcus Fülber



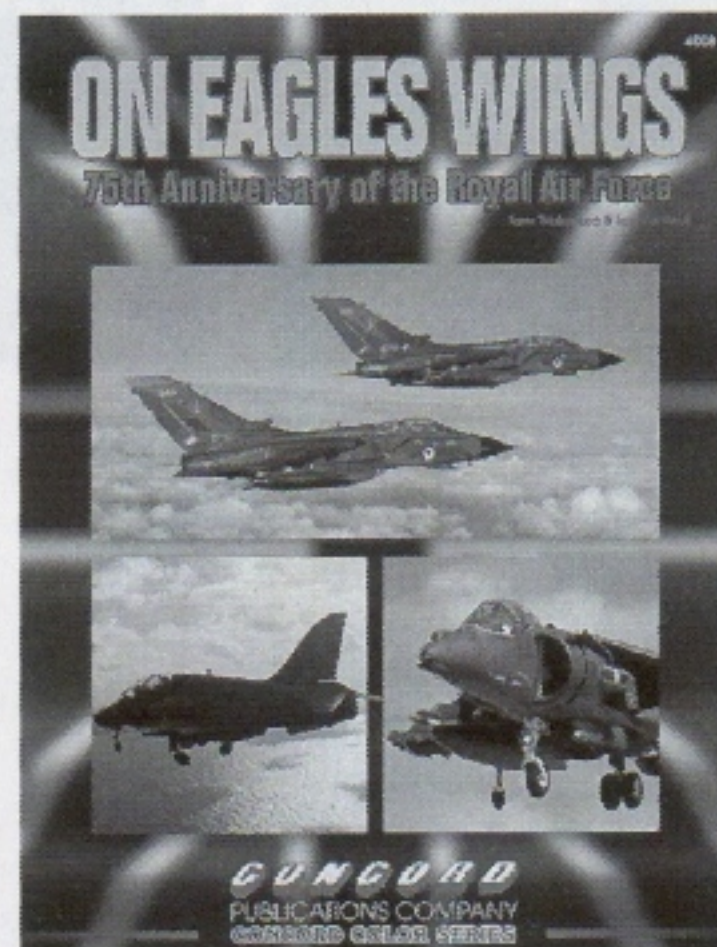
4003 Final Touchdown: The Last Days of East German Air Power  
Hans Nijhuis



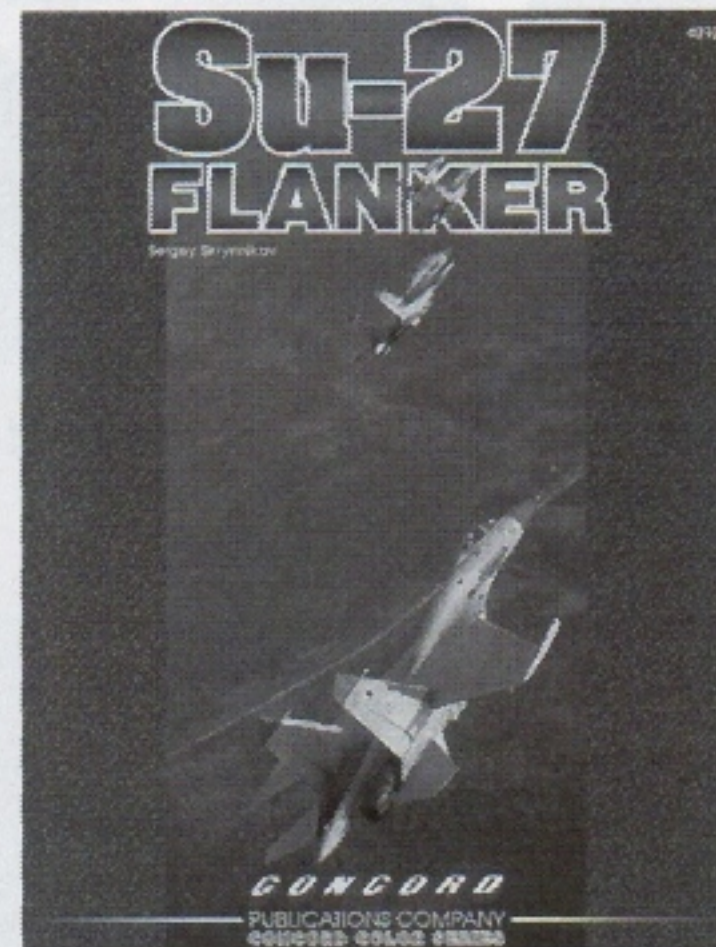
4006 Carrier Air Wing Six  
Yves Debay & James Hill



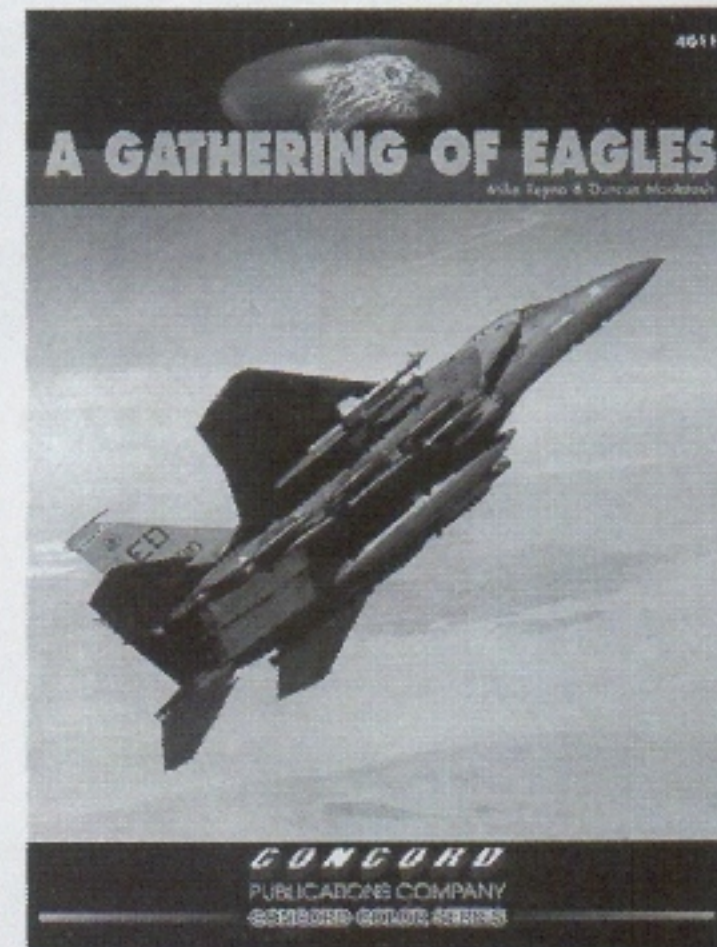
4007 Russian Falcons: The New Wave of Russian Combat Aircraft  
Steven J. Zaloga



4008 On Eagles Wings: 75th Anniversary of the Royal Air Force  
Tom Wakeford & Ian Rentoul



4010 Su-27 Flanker  
Sergey Skrynnikov



4011 A Gathering of Eagles  
Mike Reyno & Duncan Macintosh

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# THE SHIELD OF DAVID



THE ISRAEL AIR FORCE INTO THE 1990s Samuel M. Katz



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